

**“The perceptions and experiences of pre-registration nursing
students with dyslexia of the Objective Structured Clinical
Examination”.**

Submitted by Tamzin Jane Dawson to the University of Exeter
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Abstract

This thesis examines the perceptions and experiences of pre-registration nursing students with dyslexia in one university in relation to one specific assessment: the Objective Structured Clinical Examination (OSCE).

In September 2013, all United Kingdom pre-registration nursing training moved to degree level university programmes. Universities must also ensure that all nursing students meet the fitness to practise criteria laid down by the Nursing and Midwifery Council (NMC, 2015). Current national higher education policy aims to widen participation; this includes those with disabilities. Statistics show that 10% of students attending university in England have a declared disability, the main one being dyslexia. The study university has its own widening participation policy, with 19% of its children's nursing students currently registered as having dyslexia.

The Nursing and Midwifery Council (2010) states that all pre-registration nursing programmes should contain a variety of assessment strategies, to ensure students meet the academic and clinical standards required by the professional nursing and midwifery register. One of the final assessments at the study university, as with many other medical and nursing degrees, is the Objective Structured Clinical Examination, a method of assessment that requires students to perform clinical assessments and answer questions within standardised conditions, within a set time limit. This study aims to explore the ways in which nursing students with dyslexia perceive and experience the OSCE as an assessment method, and to draw conclusions on ways to develop it further.

Using a two-phase mixed methods approach, a purposive sample of 24 nursing students in year 3 of their course, was approached to participate in an online questionnaire, with 12 responding. Six students participated further in object elicitation interviews, which were analysed using a 'Framework' method.

The findings highlight the unique OSCE journeys of study participants, the impact of dyslexia on the individual and the OSCE assessment process. The thesis offers discussion and recommendations around the OSCE as an

'inclusive' teaching and assessment method, considering how the design of curricula and assessments assists in recognising students' individualism and in reducing potential issues. It is the first study to consider the OSCE with regard to such students and offers an opening for future studies focussing on learning difficulties and OSCE assessments within nursing.

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Chapter One: Introduction and Overview

1.1: Introduction

This chapter introduces the reader to this mixed methods study examining the perceptions and experiences of pre-registration nursing students with dyslexia in one university in relation to one specific assessment: the Objective Structured Clinical Examination (OSCE). The OSCE is a clinical and theoretical examination used within the last year of the undergraduate pre-registration nursing course and is the last assessment undertaken by the students at the study university.

On commencing my role as a senior lecturer in paediatric nursing, I became aware of the large numbers of students with dyslexia registered with the university's disabilities services. I was also given the role of examiner for the OSCEs and became conscious of the multiple components within the OSCE and the need for all students to be able to recall, memorise, articulate and demonstrate clinical skills, reasoning and knowledge within a set time. This made me wonder whether the OSCE disadvantaged students with dyslexia because of the multiple components and multiple strategies required to complete it. Contact with the Disability Service Manager further highlighted a lack of understanding of the OSCE assessment by staff employed to support students with their learning strategies. Disability support staff are not necessarily nurses or nurse educators and this appears to raise issues in comprehending the multiple aspects of the pre-registration nurse training that students are undertaking. The complexity of nurse training, assessments and others' limited understanding of the OSCE assessment have led me, therefore, to undertake this study to explore the perceptions and experiences of pre-registration nursing students with dyslexia in relation to the OSCE as an assessment method used within their programme.

1.2: Background

In September 2013, the pre-registration undergraduate nursing programme changed nationally from an undergraduate diploma to an under-graduate degree programme, following consultation by the Nursing and Midwifery Council (NMC) within the nursing profession and recommendations in the Willis Report

(2012) which suggested that nursing should become a degree only training. There had previously been an option for those on the undergraduate diploma to complete the final year at degree level, but, from September 2013, there became only one way of entry into pre-registration nursing. Nursing education now sits within the higher education setting and, as such, has to follow the academic and general regulations of the university whilst meeting the Professional, Statutory and Regulatory Body criteria (NMC, 2015). The widening participation philosophy of higher education is guiding education towards adopting inclusive criteria therefore extending access “to students from disadvantage backgrounds, low income households and other under-represented groups” (Connell-Smith and Hubble, 2018, p3) which includes students with disabilities. The university in which the study was conducted has a clear widening participation policy and actively encourages the concept of widening participation when recruiting students for all courses. There is, however, a tension between the widening participation concept within higher education, including the study university, and the strict “fitness to practise” requirements of the professional nursing regulatory body, the NMC (NMC, 2015). The NMC stipulates that, by the end of the pre-registration nurse training, all students have to meet the required standards for practice set out in The Code (NMC, 2015) regardless of any disability.

Within the standards for pre-registration nursing, the NMC clearly outlines the requirement for multiple methods of assessment of clinical and theoretical knowledge and skills (NMC, 2018). Therefore, within undergraduate degree programmes, multiple strategies are used to assess the students, including the OSCE. The OSCE assessment is the final assessment in the course programme of the study site and, from talking with the students, it appears to be the assessment that causes them the most anxiety and concern throughout their course.

During my 26 years in clinical practice and five years in nurse education, the nature of nursing has changed. There is now an expectation that nurses should take on extended roles and their accountability and responsibility are greater than ever before. Nurse education programmes, therefore, need to ensure that

students learn the required skills and underpinning theoretical knowledge and show their ability to apply this knowledge to practice. It also expected that nursing education assess skills and knowledge alongside clinical practice to demonstrate fitness to practice at the point of registration; it is hoped that the OSCE assessment goes some way to demonstrating this.

1.3: Overview of the thesis

Chapter One introduces the study and sets its context in nursing and nurse education today. It also clarifies the motivation behind the study.

Chapter Two provides an overview of the literature linked to the study, examining the concepts of disability, dyslexia, inclusion and assessment within nursing and higher education and the OSCE. It ends by identifying the shortage of research around pre-registration nursing students with dyslexia generally and, in particular, in relation to the OSCE assessment.

Chapter Three considers the methodological principles upon which the research study is founded. The position of the researcher is considered alongside a critical discussion around the study setting, the research design, which includes the selection and recruitment process, and the data collection methods. Each stage of the 'Framework' model as a data analysis method is presented. The chapter ends with examination of the ethical considerations of conducting this research and details the measures taken to assure confidentiality and anonymity. The ethics committees consulted for approval of the study are listed.

Chapter Four presents the findings of this study in two ways: as individual participant profiles and through thematic analysis. A rich narrative is offered, combining the words of the participants with interpretation by the researcher.

Chapter Five concludes the thesis by considering the findings of the study in relation to the wider literature and education debates. The relevance of the study to the theoretical, practical and methodological fields of knowledge is discussed, and recommendations for practice, policy and future research are

offered. The chapter concludes with a personal reflection on the thesis journey in relation to personal, professional and researcher development.

Chapter Two: Literature Review

2.1: Introduction

This chapter provides an overview of the literature reviewed and selected as appropriate for the study. Literature that is linked to the concepts of dyslexia, disability and assessment, specifically around the Objective Structured Clinical Examination (OSCE), is critically discussed. The literature spans the last twenty years in the hope of capturing most of the available studies and includes international literature published in English. The literature search drew mainly on literature from the United Kingdom (UK), United States of America (USA) and Australia, due to the depth of literature in these countries. It is recognised that this excludes potential research available in other languages, but lengthy and costly translations were not feasible within this study and the study was not a systematic review of dyslexia across countries. Primary research, systematic and practice reviews have been incorporated to ensure inclusivity.

2.2: Defining and understanding dyslexia

Dyslexia is a complex learning disability that is thought to affect 10% of the population (BDA, 2009). Its definition has given rise to much debate within the fields of neurology, psychology, education and health research and practice (Washburn et al, 2013). In order to achieve any comprehension of the issues surrounding those diagnosed with dyslexia, the various meanings, definitions and descriptions of dyslexia need to be addressed and translated into a working understanding of the term.

Dyslexia, as a term, was first recorded in 1896 by Dr W. Pringle Morgan (Washburn et al, 2013) where it was described as certain severe reading and spelling problems (Gersons-Wolfensberger and Ruijsenaars, 1997). In 1978, Miles (cited in Sanderson-Mann and McCandless, 2006) and, later, Osbourne (1999), identified that there was still no agreement on a single definition of dyslexia. Today, studies by Washburn et al (2013), Morris and Turnbull (2006), Illingworth (2005) and Roberts and Mitchell (2005) highlight the continuing absence of a universally agreed single definition, all suggesting there is still much hypothesising and postulation around a definitive definition, despite the considerable amount of research being carried out into dyslexia.

This absence of a single definition has led, therefore, to numerous descriptions and categorisations as a way of trying to come to some form of understanding of dyslexia but it is still difficult to break down the descriptions of dyslexia into specific categories as there are many areas that overlap within the descriptions (see appendix one, for a table illustrating how dyslexia can be variously characterised). A number of authors Wennas Brante (2013), Dyslexia Rapporteur Group (2008), Sanderson-Mann and McCandless (2006) and Roberts and Mitchell (2005) argue that dyslexia can be seen as a collection of symptoms, a family of difficulties. The Dyslexia Rapporteur Group (2008) also argues, in their report about Dyslexia in Wales, that dyslexia is not a single disability requiring treatment but a collection of deficiencies or symptoms affecting individuals in different ways. Burden and Burdett (2007) further suggest, in their study on school aged boys' perceptions of, and views on, their dyslexia using metaphors, that dyslexia is a phenomenon incorporating issues around language, phonological coding, reading, spelling, memory and grammar to exemplify just a few (see appendix one).

Dyslexia can be variously positioned as a condition (Child and Langford, 2011) a disorder (Millward et al, 2005), or a syndrome (Rack, 1997). There is not usually any explanation offered of the terms used and, if terms such as *condition* or *disorder* or *syndrome* are employed, this perhaps indicates that a medical view of dyslexia is being taken, possibly suggesting that it is treatable or even curable (Lucid research, 2006; Everatt, 1997).

According to Rack (1997) and Roberts and Mitchell (2005), there are two main types of dyslexia: developmental and acquired. The latter authors suggest, as do Sanderson-Mann and McCandless (2006) that acquired dyslexia often follows some form of neurological insult such as a head injury or stroke that leads to a loss of literacy skills. On the other hand, Rack (1997) and Millward et al (2005) state that developmental dyslexia derives from an unknown neurological basis, and, as Sanderson-Mann and McCandless (2006) also suggest, it is a life-long learning condition. Ridely (2011) and Snowling (2013) maintain, too, that dyslexia is neurological in origin with a probable genetic basis.

What has become apparent is that there is no consensus around a definition of dyslexia amongst the associations and groups supporting and advocating dyslexia, such as the British Dyslexia Association (BDA) and the International Dyslexia Association (IDA), or professional bodies such as The World Federation of Neurologists (WFN), the British Psychological Society (BPS) and The Department for Education (DfES) (see appendix two, for these organisations' definitions of dyslexia). The IDA (2002) refers to dyslexia as being neurologically based and suggests it is developmental, affecting language acquisition, literacy, phonological processing alongside reading, writing and spelling implying dyslexia is a collection of conditions that respond to intervention. The BDA (2009) has a similar definition in that it sees dyslexia as developmental, affecting literacy and language related skills but further considers dyslexia as a collection of symptoms experienced by individuals which can be lessened, but not cured, by interventions.

The WFN (1999 cited in Mortimore and Crozier, 2006) partially adopts a medical perspective in their definition, referring to dyslexia as a disorder, but also recognising the significance/impact of sociocultural influences, a point not considered in other definitions. The BPS (2005) and DfES (2004), however, present dyslexia as a developmental learning difficulty rather than a condition. What is evident is that all these definitions of dyslexia, although different in wording, describe dyslexia as a developmental, a life-long learning, or a specific learning, difficulty (Robinson, 2014; Scalon, 2013; Wray et al, 2012). Scalon (2013) and Lauchlan and Boyle (2007) argue, however, that these definitions are broad, demonstrating that no individual experiences the same collection of difficulties and this needs to be accepted and worked with by professionals when teaching and supporting students.

After reviewing research and theory around dyslexia, Tunmer and Greaney (2010) confronted the existing definitions, offering an alternative and expanded version. They state that dyslexia should be defined in terms of four components: a) persistent literacy difficulties b) in otherwise typically developing children c) despite exposure to high quality evidence-based literacy instruction and intervention, d) an impairment in the phonological processing skills required to

learn to read and write (Tunmer and Greaney, 2010, p. 239). This definition could offer a more concrete framework for professionals working with students. It highlights that dyslexia is a collection of persistent learning difficulties experienced by individuals; however, it does assume that individuals have met 'normal' childhood developmental milestones and have received high-level intervention. This definition does not assume that everyone with spelling or reading problems has dyslexia.

Despite these varying definitions of dyslexia, the formal diagnostic categories used by institutions and professionals today are those formulated by The World Health Organisation (WHO); Diagnostic and Statistical Manual of Mental Disorder (DSM) (2010), and the American Psychiatric Association's (APA); International Statistical Classification of Disease and Related Health Problems (ICD) (2013). These classification systems consider dyslexia under different categories with the APA (2013) viewing dyslexia as a specific learning disorder whilst the WHO (2010) consider it under behavioural and mental disorders. The APA (2013) and WHO (2010) both consider problems with reading, writing and mathematics as the main assessment criteria for diagnosis but differ in how they refer to dyslexia, with the ICD seeing it as a *developmental learning disorder* (APA, 2013) and the DSM as a *specific learning disorder* (DSM) (WHO, 2010). It is these criteria which appear to be the underpinning influence in UK and USA policy and diagnosis of dyslexia (Taymans, 2012; Buttner and Hasselhorn, 2011).

UK legislation, such as the Equality Act (2010), does not refer directly to dyslexia or learning difficulties. A general statement around disability covers them. Healthcare professional bodies in the UK such as the NMC, British Medical Association (BMA), the Royal College of Nursing (RCN) the Health Professions Council (HPC) do not offer, or refer to, a particular definition of dyslexia in their documents nor does widening participation policy within higher education define dyslexia directly, this being left to individual institutions to decide. Consequently, there appear to be differences between institutions, with the study site institution suggesting that they do not follow a set definition but use the results of testing to determine dyslexia. They do say, however, that, for

staff training and understanding of dyslexia, they adhere to the International Dyslexia Association's definition, thus following the neurological/medical stance.

The definitions discussed highlight the many differing aspects of dyslexia, but it is one - the BDA definition - that is the most commonly referred to in UK studies (Washburn et al, 2013; Snowling, 2013; Gerber et al, 2012; Ridley, 2011; Morris and Turnbull, 2007; Illingworth, 2005) despite the WHO (2010) and APA (2013) influencing UK and USA policy. Snowling (2013), Sanderson-Man and McCandless (2005) and Rack (1997) all argue, however, that an overarching definition, agreed by all to ensure parity in diagnosis and support for those individuals with dyslexia, is what is actually required.

As stated earlier, literature suggests dyslexia is a language-based difficulty affecting an individual's literacy skills (Washburn et al, 2013). Gerber et al (2012), Ridley (2011) and Illingworth (2005) also suggest it is a collection of difficulties experienced differently by the individual, which poses the question: can dyslexia be accurately defined if it affects individuals in so many different ways and comprises so many different elements? Elliott and Gibbs (2008) argue this point in their philosophical paper on the existence of dyslexia. They postulate that dyslexia is an arbitrarily socially defined construct with no clear-cut scientific basis to differentiate between, or diagnose, those with dyslexia from poor readers; consequently, it has been seen, at times, as a social convenience to label some individuals as having dyslexia. Therefore, a false dichotomy exists between those with dyslexia and those who are poor readers. They further suggest, as do Washburn (2013) and Brandt (2011), that the label dyslexia be removed and, instead, we assist all those with poor literacy skills according to their individual needs.

The debate around the nature of dyslexia is likely to continue. Whatever the definition, dyslexia can be classed as a disability because a disability is legally defined as a 'physical or mental impairment' that has "substantial and long-term negative effect" on your ability to do normal daily activities (Equality Act, 2010). The question now is: how will dyslexia be considered for the purpose of this research? The study site institution does not refer to any set definition. That

proffered by the BDA (2009) offers a broad perspective and considers the individual by acknowledging they have other social and cognitive skills. The BDA (2009) defines dyslexia as

“a specific learning difficulty which mainly effects the development of literacy and language related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterized by difficulties in phonological processing, rapid naming, working memory, processing speed and the automatic development of skills that may not match up to an individual's other cognitive abilities. It tends to be resistant to conventional teaching methods its effects can be mitigated by appropriately specific intervention, including the application of information technology and supportive counselling” (BDA, 2009, p8)

This definition considers social inclusion, refrains from seeing individuals as curable and suggests there are methods available to lessen the impact of dyslexia and allow individuals to participate in society. This interpretation aligns with the study institution's policy on widening participation and the concept of holistic care within the health system and has been chosen, therefore, as the definition to underpin this study.

2.3: Disability as a concept

Disability as a concept has many interpretations and defining it, as when defining dyslexia, is not a neutral task. As Brandt (2011) states, the definition used is determined by the stance being taken or why it is being used. For example, is it being used by governments to produce policy (for example the Equality Act, 2010), or groups of people to change society's perspective? It is necessary to consider these differing views in order to understand the complexities encapsulated in the term disability and, in particular, to position the term in relation to dyslexia in nursing, higher education and society.

The traditional or historical view of disability is situated within a medical model (Storr et al, 2011; Dale and Aiken, 2007), which considers disability as an impairment and loss of function that involves a medical diagnosis because such impairment is viewed as an illness (Cook et al, 2012; RCN, 2007). Seccombe

(2007) suggests this is a model that controls and dictates life courses for those with a disability and sees disability as intellectual or physical impairment that impacts on people's lives. Seccombe (2007) argues, in addition, that, whilst impairment may be the medical condition, disability is socially constructed as a result of the impairment, a point that will be discussed later on.

Luna (2009) argues that since the medical model is the dominant discourse in relation to disabilities, specifically learning disabilities such as dyslexia, disability is seen to mean a deficit, a lack of specific abilities, with individuals being seen as patients and specialists as experts who aim to remediate such "in-the-individual" disorders. Storr et al (2011) also discuss this point in their literature review on supporting disabled student nurses while Evans (2014) relates to these ideas in his exploratory discursive study on dyslexic nurses' constructing of identity, arguing that the medical lens uses constructs such as individualised care, impairment and rehabilitation when considering disability and, therefore, disability is seen as a deficit with those affected being seen as deviant or impaired. Bury (2000) states clearly that disability is caused by impairment whether this be caused by a disease, active pathology, genetics or trauma/accident. Whatever the cause, the medical model considers a person with a disability as impaired and unable to function within the norms of the society in which they live and sees the body as the site of the deficit in the individual and the person as deviant (Cunnah, 2015; Evans, 2014; Macdonald, 2009; Williams, 1999).

This perspective is evident within healthcare from all professionals who are looking at the impairment first and foremost to see what needs to be treated or supported, rather than considering the person per se; in the case of those with dyslexia, their literacy ability (Macdonald, 2009). The RCN (2010) also refers to the social model of disability when discussing dyslexia, viewing disability as a set of socially constructed attitudes that impair the individual's ability in society, but, when offering a description of dyslexia, they concentrate on the deficits experienced by the individual as

“a combination of abilities and difficulties which effect the learning process in one or more of reading, spelling and writing. Accompanying weaknesses may be identified in areas of speed of processing, short-term memory, sequencing, auditory and/or visual perception, spoken language and motor skill” (RCN, 2010, p, 11)

The medical model is contested by individuals with a disability who view disability through the social lens (as referred to in the UK and USA literature), minority model (USA context) or the “environmental model” as it is known in the Nordic countries (Brandt, 2011). As Taymans (2012) and Williams (1999) state, disability, from this perspective, is seen as an outcome of social organisation not pathology. The social model defines disability as a social construct because:

“individual’s attributes cannot be detached from the social, cultural or physical environments that makes them meaningful” (Gallagher et al, 2014, p1124).

If disability is considered through this lens, then the cause of a disability such as dyslexia is considered to be society and society’s structures, rather than a deficit in the individual (Leveroy, 2013; Oliver, 2013; Rowlands et al, 2013; Shakespeare and Watson, 1997). Others, for example, Ryan and Struhs (2004) and Landsman (2005), propose an interactional model where disability is not regarded as an inherent, medically defined feature of an individual but the result of both their mental and physical condition and their interaction with their environment. They argue that this interaction produces socially constructed environments and attitudes that lead to the disabling of individuals (Ryan and Struhs, 2004) and, as Macdonald (2009) contends, these constructed environments divert society away from the functional limitations experienced by an individual to obstructions caused by this “disabling environment”, a pertinent point in the development of the social model by Oliver (1983) and Finkelstein (2001a).

Luna (2009) supports the notion of disability being a socially constructed concept because, as Denhart (2008) also argues, society has created values that restrict the way our brains or bodies function. As Gallagher et al (2014) argue in their critical analysis of disability, learning difficulties as categories would not exist if cultures did not value literacy and, consequently, label the individual with poor reading skills, as disabled. This highlights the view that disability is a social construct and that, arguably, the definition of disability relates to individual societies or groups of societies, rather than being an overriding worldwide concept (Gallagher et al, 2014; Denhart, 2008).

Cunnah (2015) and Seccombe (2007) assert that the social model of disability refocuses the debate away from individual impairments to society's oppressive and exclusionary attitudes and practices, liberating those previously labelled disabled under the medical model (Oliver, 2013; Shakespeare and Watson, 1997). Other social variables such as ethnicity, social class and gender may also add to the barriers encountered by an individual (Cunnah, 2015) since social attitudes such as discrimination and prejudice are what cause a disabling environment (Secoombe, 2007). As Thomas (2004) asserts, it is society, therefore, that excludes, and treats unequally, those with a disability. Cook et al. (2012) and Thomas (2004) contend such inequality builds barriers to inclusion causing, as Finkelstein (2001a), a disability activist, argues, a society that oppresses those outside the 'norm' - those who are disabled.

Although the social model appears to "liberate" the term disabled and those with a disability, critics such as Cunnah (2015) argue that it is flawed. The main argument seems to be that this model avoids any discussion of impairment and its impact on the individual or of disability as a concept, concentrating instead on the barriers imposed by society (Cunnah, 2015). Bury (1988) agrees, adding that, consequently, this model offers an unhelpful and "over socialised" view of disability. Finkelstein (2001b) would go further, arguing that the more radical perspectives of the social model appear to be used to consider inequality rather than to emancipate disabled people. Williams (1999) agrees that, from a critical realist perspective, the social model avoids any discussion of impairments or functional limitations and suggests that the body is a real entity, whether

diseased or not, and we have to acknowledge and work with it rather than ignore it. He states that the social model disembodies the notion of disability, contending that it does not challenge impairment but in fact accepts/ ignores it (Williams, 1999). Anastasiou and Kauffman (2011) support this, arguing that the notion that disability is a socially constructed phenomenon, denies the embodied experiences (e.g. pain, illness and emotion) of those individuals. They assert that ignoring the role of biology as a cause of disability makes disability a simplistic, cultural issue. This view is developed by Thomas (2004), who suggests that the social model over simplifies and has encouraged limited insight into disability, equating it with social barriers or restricted activity.

Thomas's (2004) view of the social model is exemplified in the way in which the education system and cultures within professions consider individuals with dyslexia and in the issues/barriers (lack of resources and specialist teaching) faced within the education system (Macdonald, 2009). In nursing and medicine, for example, nurses with dyslexia meet barriers to learning or working because of a fear patients might be at risk because those with dyslexia might give the wrong drug or not carry out instructions correctly (Evans, 2014).

Although the medical and social models dominate the literature around disability, other lenses offering alternative views have appeared which either build on, or reject, these dominant views.

Emergent from the social model of disability is 'disability theory'. This is based on the principle that disability is socially constructed, but sees it as a part of normal human variation, which requires the voices of those labelled to deconstruct it as a term (Denhart, 2008). Denhart (2008) argues that disability cannot be understood outside the context in which it arises because it is socially constructed within that context. She implies that it is the perceptions of disability adopted by society that disable, which can make someone disabled, even if there are no impairments, while Higgins et al. (2002) maintain that the social construction of disability elevates a singular impairment to the complete annihilation of an individual's actual abilities. Higgins et al. (2002) and Denhart (2008) all suggest it is necessary to deconstruct these socially constructed

ideas of disability to understand the term accurately and prevent discrimination. Gelzheiser (1990, cited in Luna, 2009), however, contends that the disability model still socially constructs disability and, in fact, highlights the elements of discrimination, implying that legislation or political action is part of the treatment for disability. It is the voice of the disabled that is necessary to deconstruct the ideas formed by society and thus develop new ways of seeing disability (Higgins et al. 2002). Finkelstein (2007) acknowledges that this voice is required, but he argues, from a radical social model perspective, that disability should be understood and addressed “as a social (comprehensive) and not an individual (personal) phenomenon” (Finkelstein, 2007, p.6) and, therefore, such a voice needs to be generic not personal if society is to be changed.

Neuro-diversity, developed as a concept by those with learning difficulties, has also emerged and continues to challenge the social construction of learning difficulties, moving the focus from learning difficulties being seen as a deficit towards viewing them as normal human diversity (Cooper, no date). This concept contends that it is not the underlying neurological difference that is important but the recognition that differences exist and are part of the individual; that is people with dyslexia, for example, have differences in the way their brains function, but this does not mean they cannot be part of society. Conflict occurs because society has expectations and demands that exclude rather than include individuals and so need to be changed (Cooper, no date). Kapp et al, (2013) argue that the recognition of difference is a form of the social model of disability since it acknowledges the biological condition as well as the social and political restrictions imposed by society, arguably following more of critical realist/socio-medical view. Disability, it is argued, is part of natural human variation that exists in us all and should be celebrated rather than ignored (Kapp et al, 2013). This may need recognising by education institutes.

Further perspectives and contra arguments to the social model and, to an extent, the disability model have been developed and, as Thomas (2004) states from a sociological perspective, there is yet no unitary sociology where disability is concerned and, therefore, no one agreed model. She argues that the medical-sociological model of disability offers a bridge between the medical and

social models as it sees disability being caused by illness and impairment as well as by some social disadvantages (Thomas, 2004). This concept, it could be argued, offers a more rounded view of disability rather than seeing it purely from an impairment perspective, an idea supported by disability writers and activists such as Shakespeare and Watson (2002) and Williams (1999). This is possibly the approach that nursing, medicine and allied health professionals should also be adopting.

Williams (1999) clearly sees the body as real, something with its own mind and independent generative structures and casual mechanisms, which we have to work with when well or ill. Shakespeare and Watson (2002) continue this discussion and state that impairments (of any type) cause disability. Williams (1999) argues that, through a critical realist lens, disability is emergent and interplays between biological reality and physiological impairment. Williams (1999) contends that disability is a property that has structural conditioning and social cultural interactions; that is restrictions are produced by interactions between impairment and societal contexts. Shakespeare and Watson (2002) further this and state that individuals are disabled by their physical bodies but also by social barriers, and impairment is socially and culturally determined. Shakespeare and Watson (2002), and later Anastasiou and Kauffman (2011), consider that impairment and disability describe different places on a continuum, seeing disability as complex idea consisting of biological, psychological, cultural and social-political factors. If this lens was followed by health professions and education institutions, it could be argued the individual would be enabled rather than disabled by services offered.

Although there are dominant models of disability that underpin society and policy, they are not necessarily the ones to use when considering disability within education. The medical model appears to concentrate on disability as a condition that prevents an individual functioning and can be treated or cured. The social models are concerned with interactions and obstructions created by society but appear to neglect the idea that there may be a concurrent physical reason for the disability. The socio-medical model, it can be argued, offers a more rounded view of disability in that it acknowledges individuals are impaired

by their physical bodies as well as disabled by the social barriers of their society and society as a whole. This model allows the voice of the individual with a disability to be heard from both sides of the fence – physical impairment and social impairment – and, when considering dyslexia, this could lead to others acknowledging both the physical problems experienced by those with dyslexia as well as those that are classed as socially constructed. This, therefore, is the model chosen for this study, as it ensures a more rounded view is considered. As Rickinson (2010) argues, the understanding of disability is far from static and continues to evolve and, as such, needs to be considered from multiple stances if its effects on individuals are to be understood.

It has become apparent during the course of this discussion that Brandt's (2011) statement about defining disability, how it is not a neutral task but is determined by usage, is very pertinent. How disability is perceived is not just influenced by the lens chosen by an individual or institution per se; a country's underpinning policy and legal system, arguably social constructs of that society, have huge impact on individuals' lives.

2.4: Disability legislation

Within the UK, policy around disability and, therefore, dyslexia, has developed over the years. The Disability Discrimination Act (DDA) (Disability Discrimination Act, 1995) which made it unlawful to discriminate against people with disabilities came into force in 1995. The original version of this act stated that:

“a person has a disability if he has a physical or mental impairment that has substantial and long term adverse effect on his ability to carry out normal day to day activities” (Disability Discrimination Act, 1995, p7).

This act looked at disability within the work place and within schools, making it illegal for disabled people to be substantially disadvantaged in comparison with non-disabled people. Employers and institutions were required to make reasonable adjustments to accommodate those with a disability. Since this Act, there have been significant changes to national policy and legislation (Rickinson, 2010), which have influenced education and employment as well as

other areas of society. As Cavanagh and Dickinson (2009) argue, this legislation has provided a positive public-sector duty towards those with a disability. One of the most influential Acts in relation to education and specifically higher education has been the introduction, in 2001, of the Special Education Needs and Disability Act (SENDA) (SENDA, 2001) which was followed, four years later by the Disability Discrimination Act 2005 (Disability Discrimination Act, 2005). These Acts made it obligatory for Higher Education Institutions (HEIs) to ensure they did not subject disabled students to “less favourable treatment” within the education setting and ensured that “reasonable adjustments” were made to policies, provisions and the physical environment to enable rather than disable the individual with any disability (Rickinson, 2010). HEIs were further required, by the Disability Equality Act of 2006 (Equality Act, 2006), to ensure equality of opportunity and fair treatment for disabled people on a par with that available to those without a disability. Although these policies and legislation were proactive, enacting them was complex as there was a need to understand each Act and its implications individually. More recently, the legislation around disability has been condensed into The Equality Act in 2010 (Equality Act, 2010). While the definition of disability remains the same, more guidance is given as to what is classed as a disability; in particular, learning disabilities such as dyslexia are defined explicitly as a disability for the first time.

It is argued by disability activists that the social model has been the underlying influence on such policy and legislation (Finkelstein, 2007; Cavanagh and Dickinson, 2009). Oliver (2013) further suggests that it is the social model activists, alongside the disabled peoples’ movement, that have influenced policy around discrimination against those with a disability helping to make society more inclusive. This view is supported by Oliver (2013) who argues that the legislation supports the mainstream approach to disability - that is the social model’s view of disability - as the legislation is looking towards the inclusion rather than exclusion of those with disabilities. The Higher Education Funding Council for England (HEFCE) and the Higher Education Funding Council for Wales (HEFCW) support this view and state in their evaluation report (Harrison et al, 2009) that the social model is the underpinning influence on a policy of

inclusion as disability is now regarded as an equal opportunity issue rather than the medically related problem it was considered in the past.

Although both the social and the disability models gave a voice to the issue of disability and began influencing policy, the policies themselves appear to emphasise the underlying beliefs of the medical model as to the nature of disability (Harrison et al, 2009). The definition of disability as a physical or mental impairment that is substantial, long term and impacts on an individual's ability to function (Equality Act, 2010) demonstrates a medical model's perception of disability. It can be argued that The Equality Act (2010) also concentrates on the individual's impairment and difference rather than the barriers still presented by society (Oliver, 2013) and, as Shrewsbury (2015) contends, it positions those with impairments against 'others' (those without) and uses terms that are ambiguous such as reasonable adjustments, making it difficult to interpret. As Oliver (2013) and Harrison et al. (2009) state, interpretations are often based on the individual and their needs rather than considering the overarching barriers; that is the medical model is still the influencing model when adjustments and support in education, employment and society are being considered, conflicting with social model interpretations which are being acknowledged increasingly in public and official discussions (Harrison et al, 2009).

A similar situation exists in the USA, where the American Disability Act Amendment Act (2008) has given rights to those with a disability, with dyslexia being cited as a type of learning difficulty (Washburn et al, 2013). Its terminology is similar to that of the UK's Equality Act (2010) and again links disability to impairment and function (medical model) rather than considering social restrictions (social model), comparing an individual's ability to function with the "majority of others" within society (Shrewsbury, 2015). New Zealand and Canada also have policies that follow medical terminology and, although all these countries state they are inclusive, it can be argued that the very fact that disability is defined in law 'as impairment or loss of function' removes the concept of social inclusion they are trying to promote (Gerber, 2012; Seccombe, 2007).

Having considered the legislation and policy around how disability is considered within the UK and other Westernised countries, it is now necessary to look at how this legislation and policy influence higher education and nursing. As the legislation is based around enabling rather disabling those with disabilities, the issues around how enablement is achieved need to be considered.

2.5: Inclusion in higher education

The attitudes, perceptions and understanding of disability held by society have an impact on inclusion for those with a disability in higher education and, therefore, on those on pre-registration nursing courses (Seccombe, 2007). Seccombe (2007) suggests that these perceptions are dependent on the social, moral and ethical standpoint of society and, more specifically, of an institution and the values and beliefs of individuals per se. The concept of inclusion is also complex and, as Jahnukainen (2015), in her study on inclusive education states, it is often misused. She argues that there is often common theoretical understanding but, in practice, there are multiple realities of inclusion, which makes it difficult to implement (Jahnukainen, 2015).

Since the emphasis in legislation (Equality Act, 2010) and policy related to education is on widening participation (following the social model of disability), HEIs are being challenged to extend their access to all (Carey, 2012). With 10% of fulltime students enrolled on first degrees in the UK being diagnosed with a learning disability according to the Higher Education Statistics Agency (HESA) (2013-2014), education providers must offer inclusive curricula reflecting social diversity and meeting the varying needs of participants (Carey, 2012). As May and Bridger (2010), in their research on embedding inclusive policy and practice in higher education argue, HEIs are now subject to a wide range of drivers that span legislation, national policy, funding, regulation and student feedback. All of these together demonstrate how the legal framework has strengthened provision for disabled students (Rickinson, 2010) in recent years thus enabling, rather than disabling, disabled individuals. Jacklin (2011) and Hoong-Sin and Fong (2008) contend, however, that the discourse of policy tends to be welfare based with individual impairments still being the assessment categories used to

give an individual 'disabled' status within the HEIs; the domination of the medical model's influence once again.

Freire (1994, cited in McLaren, 1999) offers us another argument around inclusion and education. Central to his argument is the principle of inclusion for those in 'oppressed groups' within a society, as he believes that education is there to assist them to overcome their condition and regain humanity, becoming emancipated from their previous existence through learning new knowledge and skills. This can, arguably, be applied to individuals with disabilities, and, in the case of this study, individuals with dyslexia who, until recently, were under represented within higher education but who could gain knowledge and skills, through completion of an academic programme, which, Freire argues, allows them to gain a sense of humanity and become part of the dominant group of society (Freire, 1994, cited McLaren, 1999).

Freire also suggests that it is the responsibility of the 'oppressors', in this case the institutions and educators, when considering inclusion and the participation of sub-groups, to rethink not only their own role within the education system but also their own opinions and position within society. It is paramount they encourage and include those in the more vulnerable groups and they must constantly examine their position within education, and, ultimately, society, to reduce oppression of groups such as dyslexic students within education systems (Freire, 1994, cited in McLaren, 1999). Ryan and Strums (2004), in their research report, agree with Freire's underlying principles of inclusion in, and emancipation through, education. They highlight that those with disabilities have become marginalised because of society's views and barriers and, consequently, need empowering to enable them to return to education. They state that, as a system, education should not be looking at education from an individual's perspective (medical model) but at itself and what prevents the inclusion of those with a disability (social model), an issue that nursing programmes and nurse educators should bear in mind when planning future programmes (MacGiolla Phadraig, 2007).

Outhred (2012), however, suggests we look at what excludes rather than how to be inclusive. She argues, “it is essential to build a robust understanding of exclusion” (Outhred, 2012, p881) if we are to construct new concepts of inclusion and, therefore, influence participation across the spectrum. Outhred (2012) is arguing that exclusion occurs in education because of curriculum hierarchies, teachers facilitating established methods and structures, historical conceptions of excellence and through the assumptions inherent in policy. She suggests that it is necessary to consider who goes to university, selection processes and the engagement of institutions with local communities and wider groups of potential students if education is to become more inclusive (Outhred, 2012). Reform of all levels of education needs to take place, she contends, if we are to reduce social inequalities and promote true inclusion (Outhred, 2012), a view supported by Osberg and Biesta (2010) who argue that education’s language and beliefs need to change in order to promote full equality and inclusion.

2.6: Inclusion in pre-registration nursing programmes

HEIs are under pressure to ensure equality and widen participation, and the concept of inclusion within pre-registration nursing programmes offers further challenges. As the academic and practice components have equal weighting, specific and pertinent issues arise when considering inclusion. The pre-registration nursing programme is not just a degree; it is also a professional training programme validated by both the HEI and the NMC. That is, it is a degree that is training students to become qualified nurses. Therefore, to achieve their degrees, and also be eligible to register as qualified nurses, students must have completed both the theory and practice elements of the course successfully whether or not they have a disability (Rankin et al, 2010). Consequently, HEIs have to consider a student’s disability in relation to the strict fitness to practice criteria stipulated by the NMC (Carey, 2012; Rankin et al, 2010), alongside the academic and the obligation of the university to allow wider access to education as stipulated by government legislation (Carey, 2012). Griffiths et al. (2010) and Rankin et al. (2010) agree that the tension between disability legislation and the regulations of the professional partner is difficult to resolve, causing both academic and practice providers to struggle to

meet the differing demands. As Roberts and Mitchell (2005) discuss, the drawing of nursing training into higher education has widened participation as the very nature of the course - caring for those with an illness or less able than others - attracts those who are under-represented, thereby increasing the potential number of students with learning disabilities. The essential element for inclusion within a nursing programme is an individual's ability to meet the learning requirements of the course, as is the case with any programme, but there is then the added requirement that those completing a nursing registration programme must be in good health and be capable of "safe and effective practice without supervision" (NMC, 2010, p6). As Rankin et al. (2010) argue, in their exploratory qualitative study on clinical placements for nursing students in Australia, the inclusion of anyone with a disability is encouraged but they must be able to perform at the same standard as those without a disability. Although it is unlawful to discriminate against individuals with disabilities (Equality Act, 2010), those accepted on the course must be able to complete the 50% practice and the 50% theory components of the programme, as nursing is not purely academic. Nursing is about caring for others who are unwell or unable to care for themselves and those training to become nurses must be able to deliver this care regardless of their own situation (Wray et al, 2012).

Carroll (2004), however, argues that individuals with a disability should be able to train as nurses and that, as a profession, nursing not only has a legal obligation to educate those with a disability but also an ethical and moral one. It should be accepted that students with disabilities have the right to access any course they wish to follow. Indeed, Beauchamp- Pryor (2012) suggests it is the moral, political and cultural values of society that influence what is considered normal or abnormal and argues that disability should not actually be a factor in the inclusion, or otherwise, of a student on a course. This is supported by Rankin et al. (2010) who suggest that inclusion of all allows for a well-informed, more effective healthcare system. Carroll (2004) further argues that if we view nurse education as a humanistic training, rather than following a functional model (Carey, 2012), and one that involves caring grounded in nursing knowledge, then those with a disability are more than capable of fulfilling the requirements of the programme. Marks (2007) and Carroll (2004) both suggest

individuals with disabilities are not a “homogenous” group and inclusion on a nursing programme should be approached in an individualised way, as it should also be for those with no disability, a point also supported by Carey (2012). White (2007) and Sanderson-Mann and McCandless (2006) argue that those with dyslexia are often extremely intelligent and demonstrate alternative methods of completing tasks.

Marks (2007) believes educators should be considering inclusion of those with disabilities as ‘normal’ rather than ‘abnormal’. She argues that, like gender, race and sexuality, disability is part of the human experience which is no longer concealed but recognised and acknowledged by society, as is evident from the introduction of national policies such as The Equality Act (Equality Act, 2010). She further maintains that a person’s potential worth for a profession should be at the forefront of our minds when considering their place on a programme, irrespective of any disability. Ryan and Struhs (2004) support these ideas, arguing that ‘normative’ assumptions, about the *ideal nurse*, these being notions of being able-bodied and physically fit, are often seen to influence decisions about accepting those with a disability onto nursing courses. They suggest we need to consider disability through a socio-political model, looking at what there is about the programme that excludes those with a disability rather than following the notion of their disability preventing them from participating (Ryan and Struhs, 2004). Whatever the arguments, the ability of a student to complete the theory and practice elements still has to be considered, but, as Rankin et al. (2010) and Ryan and Struhs (2004) state, not all areas of nursing require the same clinical skills and, therefore, directing students to the field of nursing they may find more appropriate should form part of the educator’s role when advising prospective, or even current students, who may be experiencing difficulties.

2.7: Issues surrounding inclusion: disclosure, labelling and stigma

Although inclusion is a positive aspect of education and professional practice, there are other issues that can influence or hinder the process, for example visibility of the disability or disclosure by the person. Dyslexia is a disability that is potentially invisible whereas a physical disability, for example, is generally

more visible to the outsider. Dyslexia is often hidden, strategies possibly having been developed for doing so by the individual and, therefore, unless disclosed can go unnoticed by those involved with the students (White, 2007).

The issue of disclosure with regard to nurse education is complex as it affects the individual both in the HEI and also within the professional practice areas. Under the Equality Act (2010), those with a disability do not have to disclose their disability to either the university or the practice area. The exception is that, if the job places the individual in situations where the disability could present a risk to their own health and safety or of those around them, then disclosure is required. What has become apparent in nurse education is that those with dyslexia often disclose to the university but not to their practice areas (Morris and Turnbull, 2007). Morris and Turnbull's (2007) literature review found that the figures for disclosure of dyslexia in nurses were extremely low with only fifteen to thirty per cent of those diagnosed with dyslexia disclosing it to their employers/practice areas. Under the Equality Act (Equality Act, 2010), disclosure is the individual's choice and the university cannot disclose this information to the practice areas nor vice versa. Although all organisations need to anticipate needs, no one has defined what a reasonable adjustment is and, therefore, in practice what the anticipated adjustment for someone with dyslexia may need to be. This raises arguments about a student's responsibilities when in practice and how practice areas can reasonably support these students or ensure patient safety (an issue currently at the forefront of healthcare practice) if they are not privy to the necessary information (Opie and Taylor, 2008) concerning the needs of the student.

The implications of non-disclosure are arguably the individual's responsibility and, therefore, if their professional practice is compromised and patient safety becomes an issue, they are open to professional performance management that might have been avoided if disclosure had occurred and adjustments and support had been provided. Within HEIs, reasonable adjustments are in place but specific support for these students can only be provided, as Opie and Taylor (2008) argue, if disclosure has occurred. Hopkins (2011) contends that inclusive criteria should be embedded in the curricula and, therefore, disclosure should

not be necessary. The complexity of dyslexia means that individuals are affected differently. It could, therefore, be suggested that, by individuals not disclosing, the support that maybe required cannot be implemented either in the academic setting or the practice areas of the nursing programme (Sanderson – Mann et al, 2012). Inclusion curricula work well for some disabilities but, arguably, with something as complex as dyslexia, there remains the possibility of exclusion if all individuals are considered to have the same problems and, therefore, individualised support for students with dyslexia, such as assignment extensions, scribes, computer programmes, is paramount if they are to succeed in their studies (Morris and Turnbull, 2006).

The literature around disclosure has demonstrated there are numerous issues such as fear and stress created by a disability, labelling and stigmatisation (Sanderson- Mann et al, 2012; Hopkins, 2011 and Morris and Turnbull, 2006), that affect whether an individual divulges, or not, their disabilities to the university and practice. Labelling and stigmatisation appear to be the biggest concerns in relation to this (Ridley, 2010). Beauchamp-Pryor (2012) suggests students have concerns around labelling and, consequently, the stigma of being classed as disabled, resulting in the student struggling with their identity and inclusion within their chosen programmes. Beauchamp-Pryor (2012) found that students with disabilities often stated that society has a negative view of disabilities and that, within the hierarchy of social values, disability is not viewed highly and, at times, equates to exclusion and, therefore, there is no positive outcome from labelling oneself as disabled. If students believe this is how society views them, then self-esteem and self-concept may become problematic, as White (2007) found in her case study, and disclosure will often not be considered by the students, thus depriving them of appropriate support.

Child and Langford (2011) and White (2007) contend that disclosure can lead to students feeling discriminated against and judged in a negative way and, therefore, many believed it was easier to cope, and more likely they would be included within the team/group, by not divulging their dyslexia. This is supported by Illingworth (2005) in her interpretative study where she demonstrated that students labelled as having dyslexia often found themselves stigmatised

because of poor spelling and writing within nursing as well as their everyday lives. Morris and Turnbull (2007) also argue that the stigma of dyslexia often becomes synonymous with identity and, consequently, perpetuates hostility and the exclusion of the person so labelled, an issue that is apparent with labelling of any description, and can be attributed to the ignorance of others. Such issues need to be at the forefront of educators' minds if inclusion rather than exclusion is to transpire. Lauchlan and Boyle (2007) further argue that labelling someone as dyslexic can lead to a lack of understanding of the nature of dyslexia, with teachers believing that the issues are common to all and not realising the varied nature of the disorder. They advocate removing the label to avoid further misinterpretation by educators (Lauchlan and Boyle, 2007). This could prove a challenge to the latter if there is no distinction between students with dyslexia and students who are academically weak but without dyslexia. Anecdotal evidence suggests there is a risk of those with dyslexia, if they are not classified, being seen as 'weak performers, stupid or lazy' and, therefore, they may not receive the available support, resulting in unfair and, arguably, discriminatory practice by institutions (White, 2007).

Although the majority of literature demonstrates the negative consequences of disclosure, there is evidence to support its positive aspects in aiding inclusion. Ochs et al. (2001) demonstrate, in their study of high functioning children with autism, that positive inclusion, with teachers having knowledge of a child's learning disability, did in fact lead to that child being included and supported by teachers and their peers rather than being brushed aside, as was the case with the children whose learning disability had not been disclosed to either group. This concept of positive inclusion may be transferrable to all learning situations be it with children in school or adults in higher education.

Studies by Lauchlan and Boyle (2007) and Illingworth (2005) have also demonstrated that being given a label allowed inclusion, as some students felt liberated, could at last understand why they were having specific problems with reading or writing and felt that the process of sharing this label enabled them to move forward. Lauchlan and Boyle (2007) also argue that the process of labelling results in access to resources, support that otherwise would not have

been available, and, consequently, leads to interventions that facilitate learning. Although the label allows both student and educator to know about the disability, what must be considered is not the label but whether the needs of individual students are being met through an appropriate programme of intervention (Lachlan and Boyle, 2007). This relates to the issues around disclosure and how, if students disclose both to the university and their practice areas, support and adjustments can be implemented to assist them with their learning and their practice.

Although disclosure is the individual's choice, educators within professional courses such as nursing need to encourage students to disclose both to the university and the practice area. This may only be achieved if there is a culture of support and non-discrimination within the institutions (White, 2007). If disclosure is seen in a positive way by all, then educators can support these students in the classroom and also direct them to specific departments within the academic setting that provide support and adjustments that, ultimately, allow them to be treated as individuals. Whilst this might be comparatively straightforward to implement in a purely academic environment, there is the potential for conflict in the professional practice component of nurse education between the needs and rights of the individual students and those of the patients in their care. Indeed, the ultimate responsibility of educators involved in nurse education is to ensure that all students, regardless of disability, are safe to practice and prepared for the practice component of the course. This is a standard set by the NMC (2018) and nurse educators (who are also still registered nurses) have a professional and ethical responsibility to uphold this standard. As professionals and educators, they are bound by their code of conduct and have to ensure patient safety and that anyone involved in nursing is fit for practice.

2.8: The higher education institute

The literature debates the principles of inclusion in relation to socio-political policy and morality, but how this is actually implemented in education institutions is significant. The Quality Assurance Agency (QAA) (2010) guides HEIs towards anticipatory adjustments for the inclusion of students with

disabilities, and the ways they should/could/might implement the equality procedures.

Within HEIs, there are policies that outline the strategies for ensuring equality, diversity and inclusion of staff and students. These policies attempt to encourage access by those under-represented groups such as students from ethnic minority groups and disabled persons, and outline how there will be support, both environmentally and academically, for students who require adjustments. As Tee et al. (2010) argue, there needs to be consideration of individuals' needs by the universities and adjustments made to the programmes to assist them to achieve. It is the responsibility of the institution and of the educators to provide an inclusive learning programme (Wray et al, 2012). Carey (2012) suggests that educators should be proactive not reactive, with programmes designed to ensure inclusion occurs. Carey (2012) argues deliverers of education should be acknowledging diversity and it is the collective responsibility of institutes and educators to engage students from all backgrounds in higher education. This can be achieved through a change in curricula design and teaching practices (Devos, 2012; Wray et al, 2012) and, as Carroll (2004) argues, a change of attitude from viewing disability as a negative concept to seeing it in a positive light, something that brings concepts and insight into programmes that may not have been apparent before.

What is evident is that the policy is overarching for all faculties within a university but it does not consider the implications for programmes that are also overseen by professional bodies. In fact, there is often controversy between the management of the university and those leading professional training studies because the former does not recognise, ignores or is unaware of the difficulties and restrictions for programmes such as nurse training created by professional bodies (Carey, 2012). This is an on-going dilemma within the study faculty, and within nursing programmes per se, as the targets set by the university for inclusion may not always be met because of the specific programme and candidate criteria set by the NMC (NMC, 2015). In the case of pre-registration nursing, inclusion is only appropriate if the individual is able to carry out the skills and competencies of the profession without supervision (NMC, 2015),

which may run counter to a university policy of widening participation and equality as a whole. This conflict may cause a dilemma for educators when considering potential students for the course. As Carey (2012) argues, nurse educators are constantly trying to balance the inclusive education policy and design of the university and the more didactic model of competency learning set by the professional body- a position that he argues is not enviable and is challenging.

Nevertheless, what has become evident from the literature is that nursing programmes need to become more inclusive (Carey, 2012; Marks, 2007 and Carroll, 2004). Today, society is more diverse than ever and, as healthcare professionals, we are expected to care for patients regardless of culture, race, disability, sexuality or gender. The role of nurse education is to embed diversity and special needs into the curriculum so nurses are prepared for such cultural diversity and special needs (Carroll, 2004). This is supported by Marks (2007) who suggests that high quality and equal care should be the primary goal and, therefore, having an inclusive curriculum, including appropriate assessment strategies, and students from all backgrounds goes some way to achieving equality in care, as they bring diversity to the classroom which, ultimately, results in a wider understanding of this concept.

2.9: Assessment

Appropriate assessment strategies are essential for all students but especially for those with specific learning needs. Assessment is a central part of the educational process and curriculum design, with a powerful influence, it is argued, on learning (Craddock and Mathias, 2009; Byrne and Smyth, 2008; Rennie and Main, 2006 and Daniels, 1999). Craddock and Mathias (2009) argue, however, that assessment methods need to be improved to ensure deep learning and application of learning (assessment for learning), a point also supported by Barry et al. (2012). In a later study, Barry et al. (2013) argue that the primary function of assessment is to ensure students are meeting the learning outcomes of a programme (assessment of learning). Barry et al. (2013) and Gibson and Leinster (2011) further suggest it is also necessary to ensure that the methods used are reliable and valid, allowing students of all abilities an

equal prospect of achievement. This position is supported by Ricketts et al. (2010) who argue that it is important that the assessment methods used demonstrate equity for all and they, along with Konur (2002), contend, therefore, that the types of assessment strategies chosen must not place students with disabilities or specific learning difficulties such as dyslexia at a disadvantage. Ricketts et al. (2010) and Daniels (1999) acknowledge that this presents assessment designers with special difficulties and determining which assessments to use can be problematic.

Assessment within the pre-registration nursing BSc is formed of two elements: 50% to be completed in clinical practice areas and 50% theoretical assessment within the HEI. Both types of assessment must be passed in order for the students to be eligible for registration and, therefore, able to practise as registered nurses (Byrne and Smyth, 2008). Byrne and Smyth (2008) argue that, while it is recognised that assessment is an integral part of the learning process, which methods are appropriate for assessing the multiple learning outcomes of a programme like nursing has become a contentious issue among nurse educationalists. As Nulty et al. (2011) contend, there is a requirement in the health profession courses generally, from both the professional bodies and HEI, for a range of professional skills and attributes to be assessed, which, they argue, poses challenges to educators striving to devise assessment strategies within these courses that are equitable for all students.

Within current nursing programmes, multiple methods of assessment are used such as written exams, essays, numeracy exams, clinical competencies and Objective Structured Clinical Examinations (OSCE), all assessing different aspects of the skills and knowledge required by the students to meet the competency level required by the NMC for registration (NMC, 2018) and the learning outcomes of the academic programme. These are integrated but, in certain circumstances, can also be separate - for example students can achieve the academic component of the course and receive a degree in healthcare but this does not lead to a career as a healthcare professional if they have failed the clinical assessment. This does not occur if they pass the clinical component

but fail the academic side, as a nursing registration requires both components to have been achieved at the point of registration (NMC, 2018).

Assessment of competence is an essential component of the programmes as students must be deemed competent at the point of programme completion (Mitchell et al, 2009) but, as Walsh et al. (2009) suggest, measuring and assessing clinical competence is a challenging task because of the complexities of healthcare and the dynamic and progressive disposition of nursing. Smith et al. (2012) argue, for example, that competence is a core tenet of pre-registration midwifery programmes, which can also be applied to nursing, and that it is through the assessment of clinical skills and professional values that students are deemed 'fit to practise' (NMC, 2018). These multiple assessment methods offer different challenges for all students with, or without a learning difficulty, but it is the OSCE that Einion (2013) and Nulty et al. (2011) found causes the most anxiety.

The search for relevant literature around dyslexia and assessment has proved to be difficult as, despite using multiple terms for dyslexia such as 'specific learning disability', 'learning disability' and 'dyslexia' alongside assessment, 'assessment strategies', 'examinations', 'written assignments', 'essays and tests', the majority of literature generated is looking at diagnosis of dyslexia, an issue also discussed by Ricketts et al. (2010). In Richardson's (2015) paper on course work versus examination, it was noted that words such as examination were being used as a synonym for investigation, diagnosis and testing rather than in the context of a written academic paper under exam conditions.

Further difficulty was met when considering dyslexia, specific learning difficulties and learning difficulties and practical assessments such as Objective Structured Clinical Examination (OSCE), Objective Structured Clinical Assessment (OSCA), and Objective Structured Practical Examination (OSPE). Despite multiple data base searches through CINAHL, MEDLINE, PsycINFO, ERIC, British Education Index, Academic Search Complete, AMED and Education Research Complete, only one article was generated, but this only looked at dyslexia and OSCEs in relation to medical students. Although there

are thousands of papers on OSCEs and their counterparts across multiple professions, there appears to be none specific to nursing. Searches backward and forward through cited sources throughout this part of the literature review (Richardson, 2015) to ensure the search engines had not missed any studies due to the use of a different keyword/ terminology, still only highlighted one article around dyslexia and OSCEs - Gibson and Leinster (2011) - with the majority of literature looking at dyslexia and written examinations, written course work or Multiple Choice Questions/Modified Essay Questions, indicating a gap in the field of research relating to OSCE assessment and dyslexia.

2.10: What is an Objective Structured Clinical Examination?

The OSCE was originally designed in the mid-seventies (Harden and Gleeson, 1979) as a method of assessing the clinical competence of trainee doctors. Harden and Gleeson (1979) defined the OSCE as an objective rather than subjective method of assessing clinical competence through a series of test stations that have been carefully planned by the examiners. Harden (1988) later defines the OSCE as being an approach to assessing clinical competence in a well-planned or structured way with the emphasis being on objectivity. This underlying premise has been upheld within later definitions where OSCEs are described as examinations where students demonstrate competence in simulated conditions (Watson et al, 2002) and as an overall examination based on objective judgements (Alinier, 2003). On reviewing the literature, however, most refer back to Harden's original definition (Smith et al, 2012; Nulty et al, 2011; Anderson and Stickley, 2002) and it is this definition that appears to underpin the research that has been conducted around OSCEs as a method of assessment to date.

The format and structure of the OSCE has become varied. The original format discussed by Harden and Gleeson (1979) consisted of multiple, clinical skills and knowledge application test stations, each lasting between 4-5 minutes, around which the students rotated. Each station had an examiner who assessed the student objectively according to a pre-determined set of criteria. This original structure has been adapted to meet the requirements of the different professions such as nursing and midwifery, and has moved from

isolated task assessments to integrated skills and knowledge application and professional behaviour assessment in the form of either short assessment stations (Rennie and Main, 2006; Alinier, 2003) or longer case scenarios (Smith et al, 2012; Mitchell et al, 2009; Rushford, 2007; Major, 2005) where students complete a patient assessment and then complete other related parts such as communicating the patient's current status to another professional, administration of a drug, a drug calculation and application of theoretical pathophysiology to their patient assessment and related condition. What is apparent from reviewing the studies is that no one OSCE structure is advocated and, in fact, the structure is dependent on whether it is assessing individual skills or a more holistic patient scenario and whether it is a formative learning tool or a summative process with a mark awarded on completion that is part of the assessment process for the programme.

2.11: Why an Objective Structured Clinical Examination?

The concept of the OSCE has been adopted across the different fields of healthcare training with nursing, midwifery, physiotherapy and radiography all using a form of OSCE to assess their students' level of competence, both in clinical skills and knowledge application (Bartfay et al, 2004; Alinier, 2003). Although this method of assessment has been adopted in nursing, it is not compulsory in pre-registration nursing and there are no guidelines from the NMC. Within medical training, the GMC has set the outcomes for assessment rather than how assessment is carried out (Traynor and Galanouli, 2015), but in nursing, the only guideline on the use of an OSCE is in a document on the assessment of overseas nurses' competence when applying for UK registration (Traynor and Galanouli, 2015) which begs the question: "Why do we use it as an assessment method?" Barry et al. (2012), Nulty et al. (2011) and McCallum (2007) all argue that there is now a specific/greater need for the OSCE as a method of assessment within nursing and midwifery programmes because it has been noted that there is a reduction in clinical skills acquisition since nursing and midwifery training moved into Higher Education. Alinier (2003) also reports that nursing students also feel they do not have sufficient practical experience at the point of qualifying and argues that the OSCE can be used as a learning tool as well as an assessment strategy. Hemingway et al. (2014) and

Nulty et al. (2011) further contend that the current approaches (clinical placements, clinical mentors) used in nursing to assess practice are becoming difficult to sustain, because of pressures on workforces within healthcare, large student numbers and greater competition between institutions for relevant placements (McWilliam and Botwinski, 2012). In the light of such issues, Hemingway et al. (2014), McWilliam and Botwinski (2012) and Nulty et al. (2011) suggest the OSCE offers a method of assessing and, therefore, ensuring clinical competence, as set by the NMC (2018). Walsh et al. (2009), in their literature review on the OSCE as an assessment strategy, and Bryne and Smyth (2008), in their qualitative study on nurse educators' experiences of OSCE assessments, both argue that assessing clinical competence is complex and offers challenges to those involved. Walsh et al. (2009) further suggest that the objective assessment of clinical competence is becoming more difficult due to the complexities of the modern-day healthcare system and the use of OSCEs to assess clinical competence is one method that needs to be considered.

There is discussion around whether the OSCE is an objective method of assessment as originally purported by Harden and Gleeson (1979). On the one hand, Watson et al. (2002) consider, in their integrative literature review on OSCEs, that clinical competence is often based on the judgement of an individual which might/may lead to problems concerning subjectivity, issues around socialisation and, ultimately, bias of assessment, particularly for students with a specific learning difficulty who may not have disclosed to their mentor and appear to be having difficulty with aspects of the clinical work. On the other hand, McWilliam and Botwinski (2012) argue that the OSCE assesses performance across the cognitive, affective and psychomotor domains, which allows assessors to examine multiple aspects of a student's clinical and theoretical ability. Einion (2013) and Selim et al. (2012) suggest that the OSCE allows a broader range of skills and techniques to be assessed by a larger number of examiners, which, as Zayyan's (2011) review argues, assists in reducing bias. Mitchell et al. (2009) and Watson et al. (2002) support this idea suggesting the OSCE offers a more objective view and, therefore, is an unbiased method of assessing clinical competence because it has more than one examiner and, in some cases, each station may have two examiners, again

reducing the risk of bias (Warhurst et al, 2014). Warhurst et al. (2014), in their pilot study of the use of OSCEs in educational psychology training, further suggest that, because key components of clinical performance are assessed by multiple examiners, there is a higher prospect of objectivity being achieved, which, they argue, cannot be attained through traditional methods of assessment such as written examinations.

It is also argued that the use of tested criterion mark sheets ensures objectivity in marking (Raman et al, 2011; Zayyan, 2011; Alinier, 2003). Traynor and Galanouli (2015) further suggest that, if such sheets have been designed and calibrated using a standard-setting procedure, objectivity and reliability of marking can be achieved. It could be argued, however, that, even though there are multiple examiners and criterion based marking schemes, there is inevitably some subjectivity as examiners have to judge if the students have met the criteria of the OSCE. Franklin (2005) argues this is particularly an issue if you have inexperienced examiners or, as Rushford (2007) states, when there is only one examiner at a test station. Both of these issues may be rectified by ensuring examiners have been fully prepared (Raman et al, 2011).

In their literature review, Walsh et al. (2009) found in studies from medical education that the reliability and objectivity of OSCE as an assessment method were demonstrated through the use of correlation between OSCE scores and other forms of evaluation. They found studies from nursing, however, that did not examine reliability or objectivity and, when this was considered, the samples were small making it difficult to generalise and substantiate the objectivity of the assessment.

The assessment of clinical skills and knowledge through OSCEs has been well documented in relation to medical training but not to the same extent in nursing and midwifery (Barry et al, 2013). In a small scale descriptive survey of midwifery students, Muldoon et al. (2014) demonstrated the OSCE was a meaningful method of assessing clinical skills and learning tool. This is shown in studies by Bronson et al. (2006) and Einion (2013) who both suggest that students found the OSCE enhanced their clinical skills and knowledge with Jay

(2007) also reporting that students felt the OSCE enhanced their learning and improved their recall of knowledge and skills required for practice. Jay (2007) further argues that the OSCE provides an integrated way of measuring clinical skills and produces higher cognitive application of knowledge to the skills being tested. Selim et al. (2012), in their quantitative evaluation, also advocate the OSCE as a method that allows testing of a range of clinical skills and competence and the objective assessment of these skills. Franklin (2005), however, (in an ethnographic study of nurse prescribers' perceptions of an OSCE) found, in contrast to the majority of literature, that students found the OSCE surreal and argues that the nurses did not perform the skills tested to their normal standard because of the test situation. They argue that assessment in practice would have better reflected the nurses' clinical performance in its entirety (Franklin, 2005). This is a point that needs consideration even though most studies reveal that students found the pressure of the OSCE relevant to pressures experienced in practice (Smith et al, 2012; Jay, 2007; Rushford, 2007; Duffield and Spencer, 2002). There is, however, no mention of whether this is the same for students with a learning difficulty or not. Walsh et al. (2009) and Rushford (2007) also showed that OSCE demonstrated and developed the critical thinking skills of students and McCaughy and Traynor (2010) argue that the OSCE requires students to demonstrate critical thinking and problem solving and decision making skills in complex situations, thus mirroring practice environments. Rushford (2007) and Brosnan et al. (2006) further suggest, that the OSCE prepares students for practice because it links knowledge and skills and is seen, therefore, as a meaningful method of assessment. This point is also implied by Muldoon et al. (2014) in their survey results and in the Henderson et al. (2013) study where it is suggested that, since the OSCE can be seen to integrate skills and knowledge required in practice, it is an assessment method that should be utilised more.

Research has shown that, as well as aiding the development of critical thinking, the OSCE bridges the theory/practice gap often reported as an issue within current nursing programmes (Muldoon, 2014). Muldoon et al. (2014) and Warhurst et al. (2014) both discuss the notion that the OSCE allows students to apply knowledge to practice while Forward and Hayward (2005), O'Neill and

McCall (1996) argue that the OSCE integrates theory and practice, allowing students to demonstrate their clinical competence. This is also apparent in the results from other studies Smith et al. (2012) and Major (2005) where multidimensional components of competence are achieved through the OSCE not just a demonstration of skill acquisition.

An increase in students' confidence has also been seen to result from the OSCE assessment. O'Neill and McCall (1996) report that students consider the OSCE to be a confidence building experience with Anderson and Stickley (2002) arguing that the OSCE boosts confidence. Nulty et al. (2011) report that 58% of students in their study felt more confident in their ability after the OSCE, but there is no mention of the students' disability status within the study, which raises the question whether students with specific learning disabilities have the same level of confidence after this type of assessment as other students.

Although the OSCE appears to offer a range of positive experiences, multiple studies have highlighted that students find the nature of the OSCE a stressful experience giving rise to extreme anxiety (Anderson and Stickley, 2002; Major, 2005; Walsh et al, 2009; Nulty et al, 2011; Einion, 2013; Muldoon et al, 2014 and Warhurst et al, 2014). Byrne and Smyth's (2008) study further identified that lecturers involved in the OSCE reported concerns around students' high level of stress and anxiety during the examination. What is apparent is that, despite the reports of stress and anxiety, students themselves suggest they are an important factor in real practice (Selim, 2012; Nulty et al, 2011; Brosnan et al, 2006) and stated that being able to perform under stressful conditions reflects what they will experience in the clinical environments of current healthcare settings (Selim, 2012; Nulty et al, 2011; Brosnan et al, 2006).

Having reviewed the literature around the OSCE as an assessment method, it has become evident that, to date, few studies have considered the impact of the OSCE assessment on those with dyslexia and none has been found in relation to nursing students with dyslexia, despite an in-depth search. A study on students with dyslexia in medical education by Gibson and Leinster (2011) appears to be one of the few that looks at the performance of students with

learning difficulties such as dyslexia in skill based assessments such as the OSCE. The study compared the performance of students with dyslexia against fellow students, statistically analysing results of both groups. Gibson and Leinster (2011) report that there was a difference in performance between the two groups of students and that students with learning difficulties tended to perform poorly in the clinical examination stations in comparison to written examinations. They suggest this poor performance was due to the complexity of data interpretation and the organisation required at the stations but conclude that further investigation into the reasons for the difference in performance is required (Gibson and Leinster, 2011). As an assessment method, the OSCE requires students to recall and articulate knowledge and skills, write, read, understand, demonstrate, time manage, remember and process information, all areas that have been identified as difficult for those who have some form of dyslexia (BDA, 2009). The dearth of reported studies around dyslexia and the OSCE as a method of assessment suggests the need for a study such as the one undertaken.

Chapter Three: Methodology

3.1: Introduction

This chapter describes and appraises the methodology and research methods used within the study. The study setting and study participants are described to provide context when explaining the sample size. Consideration of the research tools and analytical framework is presented for evaluation. Ethical issues are discussed in relation to this study. The chapter concludes with a discussion on the measures taken to ensure the integrity and trustworthiness of the data presented.

3.2: The study aims and objectives

The overall aim for this study is to explore the perceptions and experiences of nursing students with dyslexia who have undertaken the Objective Structured Clinical Examination (OSCE) as a method of assessment, in order to assist in the development of the OSCE as an assessment tool.

The research question and objectives are derived from the relevant literature, professional experience in the field of nurse education and the regular use of the OSCE as a method of assessing student nurses. The question posed was:

What are the perceptions and experiences of pre-registration nursing students with dyslexia, of the Objective Structured Clinical Examination (OSCE) as a method of assessment?

The study objectives are:

- to explore the perceptions of the OSCE assessment of nursing students with dyslexia
- to explore the experiences of the OSCE assessment of nursing students with dyslexia
- to draw conclusions on ways the OSCE can be developed as an assessment method for nursing students.

3.3: Methodological positioning

The researcher, and their position regarding the chosen phenomenon, influence the design of any study. Houghton et al. (2012) suggest attention should be given, in any research study, to the way the link is made between the need for knowledge (aim) and the means of producing that knowledge (methods), and that it is the link between the methods and aims that represents the researcher's world view (paradigm) which, in turn, shapes the methods used. Such a link between the aims and methods may assist in the preparation of a study design, but, since this link is not absolutely defined, there is no requirement to use a particular method with a particular paradigm in research (Roulston, 2010; Teddlie and Tashakkori, 2009; Morgan, 2007).

Roulston (2010) and Pansiri (2006) argue that use of a single world view limits the ability to capture complexities of phenomena and constrains the perspective achieved. It is acknowledged, however, that this may be important in some studies and, therefore, should not be dismissed when considering a study design (Teddlie and Tashakkori, 2009). Such debates led to my addressing two questions: Who am I? Where do I position myself within the world of research?

Firstly, I am a senior nurse working in a Children's Intensive Care Unit, where I teach and support all members of a multidisciplinary team in the care of children requiring intensive acute care and interventions. Secondly, I am a part-time senior lecturer in Children's Nursing in an English university, preparing students to become qualified children's nurses. This is a multifaceted role that involves leading academic modules and year groups, student support and face-to-face teaching in classrooms, lecture halls and simulation laboratories. Thirdly, I am a research student completing an education doctorate where I am seeking to understand and develop practice in the 'real world'. Therefore, I position myself as a practitioner-researcher (Jarvis, 1999).

These roles, although in different settings, are complementary. The clinical expertise and knowledge acquired from clinical practice support my teaching and student preparation on a daily basis. I can bring the current clinical world to the classroom through examples of actual cases and patients' stories, thus

demonstrating the application of the theoretical knowledge, concepts and skills being taught, and enhancing my teaching and learning strategies. This helps motivate students as they can apply the theory to the clinical presentation and construct pictures of the way children and families are cared for and treated, making their future roles more tangible. The integration of practitioners into teaching also offers students role models. Bringing my practice to the classroom increases my credibility with the students as they see someone who is still practising regularly and is part of the profession they are striving to join. It can pose difficulties, however, as it may be interpreted by some individuals as my not being dedicated and engaged in the academic world. I would argue that, as nursing is not a purely academic subject, but is also a practical profession, there is a need for both academics and clinicians to work with students so they gain a holistic insight into the profession.

Intensive care nursing tends to be routed in biomedical views of care due to the nature of the interventions and treatments required by the group of patients in this setting. This aligns with a scientific positivistic view of reality, as there is reliance on statistical and “proven” scientific evidence to support clinical interventions. Holistic care of the patient and family, however, is a fundamental part of the care delivered and of the intensive care nurse’s role. The use of a variety of scientific quantitative evidence, qualitative evidence and practical knowledge and skills within intensive care nursing ensures this holistic care is provided. The treatment of people as individuals is paramount; they are not just patients with illnesses that need to be cured. The combination of multiple views of practice therefore, influences the integration of theory and practice in the education setting, in training students to become nurses and, also, in approaches to research. In order to ensure the development of safe and competent practitioners in both the education and clinical setting, it is necessary to have this rounded view and be able to apply the different views of health and medicine to the clinical care of the children as well as to the training and development of students and staff. Studying for an education doctorate has enhanced my ability to consider research, find evidence and integrate the research into clinical practice. It has taught me the importance of looking through multiple lenses to achieve a holistic picture and to be able to debate

issues around practice using the literature and evidence available. This programme of study has assisted me in supporting students with reading and critiquing evidence through their research journeys, exemplifying Jarvis' (1999) argument concerning the role of practitioner-researchers: those who are expert practitioners bring real world experiences to the academic world and want to investigate the real world to develop effective and efficient working practice.

This study reflects the role of a practitioner-researcher, which is one that uses the tools and methods that will help to discover and explore the information, knowledge and understanding required to answer research questions rather than reflecting or being wholly influenced by a particular paradigmatic stance (Jarvis, 1999).

3.4: The study design

Positioning myself as a practitioner-researcher means the design of this study is influenced by factors such as feasibility, workability and my real-world perceptions rather than being embedded in one particular idealistic or philosophical set of assumptions; that is the study is influenced by pragmatism as a world view but also by the values, diversity and differences within mixed method research.

Pragmatism looks at producing meaning from concepts that have real world applications (Ormerod, 2006) and states there are multiple versions of truth and reality, that reality is multi-literal, complex and multi-faceted and is shaped by the individual's experiences and perceptions (Houghton et al, 2012). Pansiri (2009) and Ormerod (2006) argue that *knowing* cannot be a matter of individual minds mirroring reality as each mind reflects differently at different times and, therefore, reality does not stand still long enough to be mirrored. As Niglas (2010) suggests, the landscape of inquiry is changing and, therefore, the paradigm system cannot be fixed but should be evolving to support these changes. Within the pragmatic stance it is argued that there are multiple ways of generating and using knowledge, which may be subjective, objective, scientific or humanistic (Cohen et al, 2011; Jarvis, 1999). Knowledge is generated through social interactions and by considering others' perceptions of

their lives and world to be as valuable as our own (Cohen et al, 2011).

Pragmatism looks at practical problems in a practical world with the belief that there is a single world of which all individuals have their own interpretation (Morgan, 2014; Morgan, 2007). It is a lens that allows researchers, especially practitioner- researchers, to discover what they want to know without being held to a set of pre-determined methods. This view is about combining and using data from the different paradigms to find useful points and connections to assist understanding of the area under investigation (Morgan, 2007). Using a pragmatic approach allows for flexible methodological approaches (Houghton et al, 2012) and, consequently, opens up newly generated knowledge to multiple perspectives giving a more rounded view of the phenomena. As Morgan (2014) argues it recognises the value that different approaches to an inquiry can offer.

A mixed method study allows for exploration of phenomena from a multi-dimensional position, which, Mason (2006) argues, allows for a fluid and flexible way of understanding a subject. Teddlie and Tashakkori (2009) suggest specific methods are chosen for a study as they are deemed appropriate. Niglas (2009) proposes that each method used generates data that is linked together, consolidated and integrated to create a whole picture. Niglas (2009), Mason (2006) and Green (2005) argue that this is also created by emerging data from the different methods, which, individually, create part of the picture, but when collated offer the whole picture.

Table 1: Comparison between Pragmatism and Mixed Methods (Green, 2005; Houghton et al, 2012)

Pragmatism	Mixed Methods
One real world	A real world
Multiple versions of truth	Multiple ways of knowing
Multiple versions of reality	Acknowledgement of diversity and difference
Multiple ways of generating new knowledge	Multiple ways of coming to know
Emphasis on topic and what works to investigate it	Multiple ways of collecting, analysing and viewing data
Multiple ways of using knowledge	Constructs a “whole picture”
Construction of own world view	

Although pragmatism is considered by some to be the underlying world view of mixed method research, some researchers consider it a way of viewing reality

in its own right (Mason, 2006; Green, 2005). Mixed method research and pragmatism have similar underpinning beliefs, as seen in table 1, but the former concentrates specifically on the multiple ways of knowing, multiple ways of coming to know and multiple values of reality; in mixed methods, ways of knowing are also ways of valuing (Green, 2005).

Green (2005) further suggests that mixed method research intentionally engages with differences and diversity, tolerance, acceptance and respect for multiplism, and values differences (Teddlie and Tashakkori, 2009), an important point for this study where students with a disability are the participants. It is important, however, to ensure, when undertaking a mixed method study, that 'whose values' and 'whose views' are clearly identified (Teddlie and Tashakkori, 2009) throughout the process. Mixed method research allows for multiple views of a phenomenon through the use of different lenses, perspectives and stances within the research to understand the complexities and differing contexts of phenomena. A mixed method study allows for exploration of phenomena from a multi-dimensional position, which allows for a fluid and flexible way of understanding a subject (Mason, 2006), and the methods chosen are those deemed appropriate for that study (Teddlie and Tashakkori, 2009). Use of a single lens may limit the view and understanding of the phenomena and Mason (2006, p13) argues that there is a need to 'think outside the box' when designing any research study.

Green (2005) considers that this "whole picture" is important especially within education where there are tensions between the different stakeholders involved in education programmes, arguing that the use of mixed method inquiries allows greater possibilities of responding to the different stakeholders as data are generated in multiple ways. This, Green (2005) argues, will then address the different interests/perspectives of the stakeholders. This is an important consideration within this study where the results could influence change within an assessment strategy, teaching and learning practice and student support systems and, therefore, the different data sets could allow data to respond to the needs of the different stakeholders involved.

Niglas (2009) argues that, in mixed method research, the combination of methods used is influenced by the research question and the study aims rather than the philosophical stance. This is an influencing factor in this study where the topic, question and study aims are the driving force of the study. Mason (2006) and Niglas (2009) do state, however, that if using mixed methods, then integration and collaboration of the methods used is important and careful consideration needs to be given to this aspect of a study. The design of this study follows the principles Niglas (2010) describes as a two-phase study where components from one part lead into the other part of the study. She argues that these then become complementary and integrated at different stages of a study, assisting in developing a holistic picture of the phenomena (Niglas, 2010; Green, 2005).

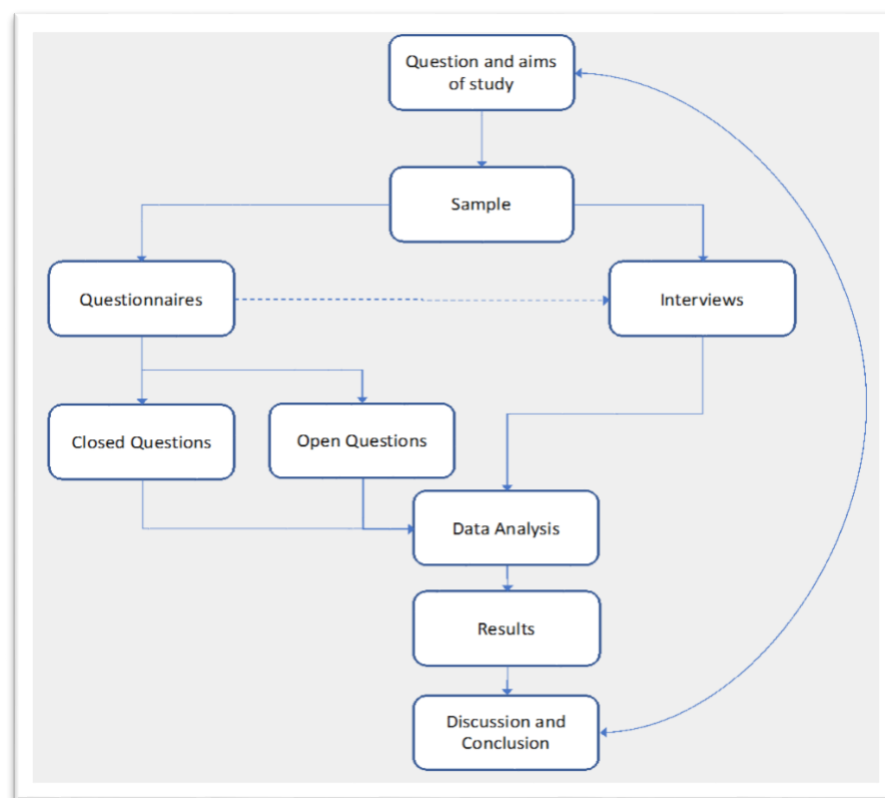


Figure 1 Study Design

The study is split into two phases, the questionnaire phase and the object elicitation interview phase. The questionnaire phase is designed to collect data from a larger sample group and also as a way of gaining access to respondents for the object elicitation interview phase. The quantitative data from the

questionnaire is analysed separately and descriptive statistics presented. The qualitative data from the questionnaires is integrated into the interview process. The qualitative data from both aspects of the study are then analysed together using a “framework” approach (Ritchie and Spencer, 1994). The results and discussion are developed using both data sets, quantitative and qualitative, to represent the findings and support the discussion. As a design, this study integrates the two methods used systematically throughout the whole process, presenting the different individual parts of a picture which combine to represent a whole picture of the perceptions and experiences of the OSCE as an assessment process from the perspective of nursing students with dyslexia, as shown in figure 1.

3.5: The study setting

The study setting is an English University training 270 students a year to become Children’s Nurses. The majority of the students (200) are undertaking an undergraduate three-year degree (BSc) in Children’s Nursing, 50 students the two year Post graduate Diploma in Children’s Nursing while 20 students are qualified nurses undertaking a second registration training on either the BSc course or the Post Graduate Diploma course, depending on prior academic study. At the time of this study there, were 150 year three BSc students remaining on the course. The courses combine theoretical and clinical components with students having to undertake academic and clinical assessments in order to qualify as Registered Children’s Nurses.

University records show that 10% of the nursing students in each year are registered as having dyslexia (HESA, 2013/14). In the cohort under study, this was number was higher with 24 students out of 150 (19%) registered as having dyslexia, possibly attributable to a natural variation in statistics.

3.6: Study participants

The participants in this study were students in the final semester of their BSc in Children’s Nursing course, having completed two and half years of academic study and clinical practice placements. These students were registered with the university as having dyslexia and had completed the OSCE assessment.

The research literature reveals much discussion over the selection of study participants, suggesting it needs to be an integral part of the research design and should reflect the underlying approach of the study and the methods being used for data collection (Parahoo, 2006; Polit et al, 2001). It is often argued, however, (Creswell, 2014; Parahoo,2006) that the selection of study participants is guided by the research question rather than being dictated by the underlying philosophical stance of the study. Punch and Oancea (2014) would say that the most important part of choosing study participants is ensuring that they fit in with the research questions. The selection of participants will be dependent, necessarily, on the study setting and availability of participants (Creswell, 2014). Cohen et al. (2011) discuss the latter arguing that the researcher needs to ensure that access to participants will be permitted and is also practical. Consequently, the researcher should consider how requests for access are conducted, both formally and informally (Cohen et al, 2011).

In this study, the required group of participants was available and had been identified as being a population within the study setting. Ethics clearance from the study site's Ethics Committee was gained to allow access to the students (see ethics section 3.10). It was also essential for this study to liaise with the manager of Disability Services for the study site who holds the information on the target population and has access to the students. The Disability Service Manager acted as the 'gate keeper' to the participants and it was agreed that emails and study invitations would be sent via the Disability Team.

Since the required study population needed to have a specific profile - students on a pre-registration nursing course, registered as having dyslexia and having completed the OSCE assessment - the sampling method used was purposive, a non-probability method that excludes the wider population by selecting a specific group to be studied (Cohen et al, 2011). Purposive sampling is deliberately selected by the researcher (Creswell and Plano Clark, 2011; Parahoo, 2006) and allows the researcher to collect in-depth information, description and experiences of the subject under investigation from those in the unique position to provide such information (Creswell, 2014; Cohen et al, 2011; Creswell and Plano Clark, 2011). It enables the researcher to gain insight and

in-depth understanding of the subject, and also provides special and unique cases to illustrate the study's questions (Cohen et al, 2011). Thus, Burns (2000) argues, by illustrating the findings using unique cases, the credibility of the study is enhanced. In this study, the students with dyslexia on the pre-registration nursing course were in the position of having experienced the OSCE as students with dyslexia. Therefore, they provided unique insight into, and perceptions of, this assessment process.

The use of purposive sampling is critiqued as being limited in breadth because of its selectiveness (Cohen et al, 2011) and, therefore, as Cohen et al. (2011) argue, it can be biased as it only collects data from participants selected by the researcher. This could be an issue if generalisation and representation of the wider population were required to answer the research question, but, in the case of this study, the researcher was not looking to generalise findings for the wider population but to relate findings to the specific group of students and to gain an insight into, and develop an understanding of, the students' personal experiences and perceptions of the OSCE assessment (Creswell and Plano Clark, 2011).

The number of study participants also needed consideration to ensure enough data was collected to answer the research question (Green and Thorogood, 2014). There are no rules or specified numbers for participation in any study type; it is the required population, the methods (and depth) of data collection and the purpose of the study that influence the number of participants recruited (Creswell and Plano Clark, 2011). The use of questionnaires allows for a large population to be targeted (Sue and Ritter, 2012) whereas face to face interviews often target smaller numbers of participants (Green and Thorogood, 2014). It is the actual study outcomes that influence the numbers required overall and, as Creswell and Plano Clark (2011) argue, it is the size of the required study population available that dictates the study numbers. Creswell (2014) and Creswell and Plano Clarke (2011) suggest that an ideal number for face to face interviews is 4-10 participants, but they acknowledge that it is the richness of the information acquired that dictates the numbers required to answer the research question (Green and Thorogood, 2014).

In this study, the researcher knew that the target population - students registered with dyslexia - totalled 24, which dictated the number available for both parts of the study. As this was limited, it was decided that all 24 students would be included in the study questionnaire. Response rates to questionnaires cannot be guaranteed (Cohen et al, 2011; Parahoo, 2006) so the inclusion of all 24 students was necessary to optimise the number of possible responses although participation was still dependant on students' willingness to be involved in the study. Consequently, the use of stratification or other sampling methods was not deemed applicable for this study. It was hoped a response rate of over 50% would be achieved from the questionnaire, which was sent to all 24 students via the Disability Service Manager.

The target population for object elicitation semi-structured interviews was the same group of students as for the questionnaire. The participants for this part of the study were again a purposive sample with voluntary participation (Sue and Ritter, 2012). This stage of the study relied on the target population having completed the questionnaire and stating they would be willing to participate in the interview. It was decided that all students who said yes to the interview stage would be included because the target population was small. It was hoped that 6-8 interviews would be achieved during this stage of the study. This falls within the numbers for interviews suggested by Creswell (2014) and Creswell and Plano Clark's (2011), but it is the quality of the interview data rather than the number of interviews that is important when data collecting using this method (Green and Thorogood, 2014; Punch and Oancea, 2014).

3.7: Methods of data collection

The study had two data collection methods: an online questionnaire and object elicitation semi-structured interviews.

3.7.1: Questionnaires

The data collection method for the first stage of this study was an Internet based questionnaire. This is a method that seeks written/typed responses to a set of written questions or statements at a given point in time (Parahoo, 2006). It is essentially a quantitative approach (if closed questions only are used) to

data collection because the questions are predetermined, standardised and structured in their design with little scope for variation and, consequently, produce data that is confirmatory and quantifiable. It can be used in any study type either as a sole method of data collection or in conjunction with other methods such as interviews (Cohen et al, 2011; Parahoo, 2006), as in this study. As Cohen et al. (2011) argue, a questionnaire can have different scopes and be descriptive, exploratory or confirmatory, but, whichever scope it takes, it produces data on phenomena and concepts that can then be investigated further. The questionnaire in this study collected information on attitudes, knowledge, beliefs, opinions, experiences and perceptions (Cohen et al, 2011; Rattray and Jones, 2007; Parahoo, 2006) in a standardised format, which allowed for comparison and quick analysis (Cohen et al, 2011). It is the standardisation that makes questionnaires a dependable method of data collection (Muldoon et al, 2014; Brosnan et al, 2006) and, therefore, contribute to the generation of new knowledge (Punch and Oancea, 2014). The completed questionnaires allowed access to participants for the object elicitation semi-structured interviews and the participants' questionnaire answers were then integrated into the interview schedule for clarification and expansion.

The use of a questionnaire in the first stage of this study allowed data to be collected efficiently and economically in a relatively short space of time (Cohen et al, 2011; Rattray and Jones, 2007; Parahoo, 2006). Online questionnaires further reduce cost when resources are limited (Sue and Ritter, 2012) which was a consideration in this study as there were no financial resources available for postage or printing of the questionnaire. Sue and Ritter (2012) discuss the cost of survey software, the use of free survey sites and the restriction imposed on the user; that is limitations on the number of questions that can be asked, question designs and ability to analyse data. This was not a problem in this study as the researcher's institution has a licence for the Bristol Online Survey, which has no restrictions and no cost implications.

The online questionnaire is also seen as a convenient method of data collection as distribution to participants is efficient (Creswell, 2014; Sue and Ritter, 2012), and it allows access to potential respondents who may not be in the same

geographical area (Stacey and Vincent, 2011; Oppenheim, 1992), as was the case in this study where the students, on clinical placements across a city, could use any computer with an internet connection to complete the questionnaire. Pilot et al. (2001) further suggest that the use of questionnaires for data collection allows participants a high degree of anonymity as they can be sent through a third party, in this case, the Disability Manager. Morris and Turnbull (2007) maintain this is essential, especially when examining sensitive issues such as disability or when students do not have to disclose a disability as in this instance. Stacey and Vincent (2011) argue that online questionnaires achieve a larger response rate than methods such as interviews but, as Cohen et al. (2011) and Parahoo (2006) warn, response rates can be low as they depend on respondents completing the questionnaire. This issue needed consideration, as the target group was limited in number with an underlying learning difficulty - dyslexia - that could affect their willingness to complete a questionnaire.

There are other problems associated with questionnaires apart from response rates. They can be time consuming to develop and superficial (Parahoo, 2006) Online questionnaires have the added complication of the researcher needing to engage with survey software (Sue and Ritter, 2012) and the participants being able to use and have access to a computer (Sue and Ritter, 2012). This study utilised the online method as the participants had engaged in email correspondence, online learning and assignment submissions throughout their course so their ability to use computers and access to computers was not thought to be an issue. Nevertheless, there was an option for participants to request and complete a hardcopy of the questionnaire.

2.7.2: The questionnaire design

The study questionnaire was designed to be completed online, taking into consideration background colour, typeface and overall layout. Fuller et al. (2004) argue that a minimal font size of 12 point and Arial typeface should be used as students with dyslexia find this easier to read, but the British Dyslexia Association (2015) states that font size and typeface are a personal preference although sans serif is commonly used by adults with dyslexia. The

questionnaire was designed with a light beige background using Arial typeface and font size 12. Feedback about this design from piloting the questionnaire was positive; therefore, the design was not altered prior to circulating the final version.

3.7.3: Question types- closed

It was important to consider the types of questions and wording used within the questions carefully. Oppenheim (1992) argues that the researcher needs to have an idea of the pattern and type of enquiry (is it factual or analytical?), with Cohen et al. (2011) and Clark (1999) stating there needs to be specific aims if the questionnaire is to work as a tool. Rattray and Jones (2007) and Fuller et al. (2004) suggest that the questionnaire should be concise and should start with factual, short answer questions, which lead into more in-depth qualitative questions. This point was considered and incorporated into the design of the questionnaire. The study questionnaire was constructed with a total of 36 questions, which were a mix of closed and open questions. These emanated from extensive reading of the literature, from knowledge of problems experienced by students with dyslexia and from previous knowledge of the OSCE as an assessment method (Ellis, 2013) (see appendix three, research papers used for the questionnaire.). Background and biographical data were collected in questions 1-5, which Knight (2002) and Burns (2000) suggest is a good way to 'warm up' respondents. They state that starting with a more subject related question may deter people from answering, thus failing to complete the questionnaire (Knight, 2002; Burns, 2000; Murray, 1999).

Dichotomous questions were used throughout the questionnaire to elicit unequivocal responses and channel respondents to further pertinent questions around a topic (Cohen et al, 2011; Murray, 1999). Internet based questionnaires can be pre-programmed easily to take respondents directly to the next set of questions so preventing confusion or unnecessary responses. Such yes/no questions allow for comparison and descriptive statistics can be obtained from the responses (Cohen et al, 2011).

Quantification of experiences and perceptions from respondents on the OSCE as an assessment process was also expected through completion of the Likert scaled closed questions (questions 12-33) allowing quantifiable data to be collected. Cohen et al. (2011) argue that rating scales, and Likert scales, allow measurements of opinion, quantity and quality to be integrated and considered alongside each other. Forward and Haywood (2005) and Muldoon et al. (2014) all suggest that Likert scales allow objective ratings of statements and can measure areas around feelings, attitudes and perceptions as was intended within the study questionnaire. Negative and positive statements were entwined throughout the questions to prevent rhythmic box ticking on a page (Parahoo, 2006). It was also important to consider the balancing of the Likert scales. Cohen et al, 2011 recommend a balance between positive and negative answers in a scale to ensure imbalance does not bias the results. Careful consideration was given, therefore, to the different types of scales shown in the literature prior to devising the study questionnaire to reduce this risk.

During the construction of possible questions, my supervisors and I discussed the “sitting on the fence responses” if using a Likert scale with an uneven numbered of responses. It was decided to use an even scale to prevent this as Cohen et al. (2011) suggest, although they also state that perhaps respondents should be allowed to “sit on the fence”. It was also decided that the questions should ensure a decisive answer as one of the aims of the study is to generate data to influence the way the OSCE assessment strategy is designed for future students with, and without, dyslexia. The final Likert scale had 6 categories ranging from strongly disagree to strongly agree, commonly used statements in Likert scales (Cohen et al, 2011) (see appendix four, study questionnaire).

3.7.4: Question types- open-ended

The questionnaire also included open-ended questions (questions 10, 11 and 34-36) that derived from the literature, students' experiences and the OSCE as an assessment method (see appendix three, research papers used for the questionnaire), and were designed to capture more specific information from the respondents (see appendix four, study questionnaire). Cohen et al. (2011) and Rattray and Jones (2007) argue the use of open-ended questions allows for

more honest, personal and in-depth answers from respondents. Cohen et al. (2011) and Rattray and Jones (2007) argue, open ended questions generate “gems of information” and enable authentic and unique answers and are, therefore, a highly effective way of looking at the experiences and perceptions of respondents (Arnon and Reichel, 2009). Such questions are flexible, do not limit responses and allow for exploration of experiences and perceptions (Harlacher, 2016). These types of questions generate pertinent information and may assist in generating future questions and items to be included in an interview. Indeed, the open-ended questions and responses assisted in the design of the semi-structured interview used later in this study.

The analysis and interpretation of open-ended questions can be time consuming and comparisons are difficult (Harlacher, 2016 and Rattray and Jones, 2007). There were only five of these questions in the questionnaire. If the respondent answered the previous closed question in a specific way answers would be directed to the free text boxes for completion. It was anticipated that, by filtering and limiting the number of open-ended questions, the problem of questions not being completed would be reduced and, it was hoped, participants would not be discouraged (Murray, 1999).

3.7.5: The pilot questionnaire

The online questionnaire was piloted prior to circulation. A rigorous drafting process is required before circulation to ensure accessibility and user friendliness (Fuller et al, 2004; Oppenheim, 1992). The questionnaire was designed on paper and then transferred to the Bristol Online Survey programme. The flow and structure of the questions was formatted according to the online system and expert advice sought from lecturers, supervisors and other researchers on the overarching design of the questionnaire to ensure the questions were reflecting the aims of the study (Ellis, 2013; Fuller et al, 2004 and Murray, 1999).

The general layout and format of the questionnaire was considered with specific attention given to background colour, font size, type face to ensure it was user friendly for those with dyslexia (Fuller et al, 2004; BDA, 2015). As there was no

negative feedback from those testing it, no changes were made to the final questionnaire. The online link for the questionnaire was tested from both the university and private email accounts to ensure it worked from different types of accounts. No issues were encountered with the link.

Parahoo (2006) and Pilot et al (2001) also discuss the importance of testing question types and wording before circulating the actual questionnaire to the study group to ensure respondents will understand the questions and instructions fully. Parahoo (2006) suggests contextualisation of the questions can be difficult in a questionnaire, as there is little opportunity for question clarification or for respondents to elaborate an answer. They may, at times, have a different understanding of a question from the researcher causing confusion and misunderstanding (Parahoo, 2006). A pilot questionnaire provides a means of reducing potential difficulties (Polit et al, 2001; Oppenheim, 1992). In fact, Parahoo (2006) and Murray (1999) argue that the pilot questionnaire should be sent out to a group of respondents similar to those required in the actual study so questions can be refined to ensure understanding and to test their construction (Bosson et al, 2006). Two students with dyslexia who were on a different programme from the study group, but who had undertaken the OSCE assessment, piloted this particular questionnaire. The students were asked to complete the questionnaire, time how long it took and make any comments on the instructions, wording of questions, structure and design. One student did not offer any comments; the second, however, found some of the instructions unclear and commented on the wording and instructions of two questions. This student said it took her half an hour to complete the whole questionnaire but stated it was

“probably because I was looking in detail at the questions to be able to offer feedback”.

These comments were discussed with the research supervisors and the final wording was altered to ensure clarity and understanding (Forward and Hayward, 2005; Oppenheim, 1992). The threading of questions according to

answers and the movement through the questionnaire were also tested and received positive reports, one research supervisor stating,

“however hard I tried to make it go wrong I was unable to mess up the flow between questions”.

Having noted the feedback from the pilot questionnaire, it was felt that the final version was as accessible and user-friendly as it could be; that the instructions and questions were clear and that understanding and comprehension should not be issues for respondents.

3.7.6: Execution of the questionnaire

The most efficient method of ensuring all eligible students in the cohort under study were contacted was via email, the normal method of communication within the university, since they were not on site (Sue and Ritter, 2012). An Internet based questionnaire was, therefore, an important means of collecting data. The distribution of the online questionnaire occurred via the Disability Services Team who have access to university email addresses for all registered students with dyslexia and were able to identify eligible students without identifying them to the study (Arnon and Reichel, 2009; Fuller et al, 2004). An email was sent consisting of an introduction and invitation to participate in the study, my contact details and those of the research supervisors and the hyperlink to the survey with the password (Sue and Ritter, 2012) (see appendix five, recruitment email for the online questionnaire). The inclusion of a hyperlink allowed participants to click on the link to gain immediate access to the questionnaire or copy and paste the password on to the access page. The Bristol Online Survey software allows the creation of a respondent list, which can be sent directly from the survey programme, allowing reminders to be sent solely to those who have not completed a questionnaire (Sue and Ritter, 2012). It was decided, however, that this would not be utilised as anonymity was essential for participants and, as Morris and Turnbull (2007) and Alinier (2003) argue, the use of a third party would help ensure this.

The timing of the email contact was also considered since, as Sue and Ritter (2012) suggest, being aware of when and how often people access emails can be beneficial. The timescale for data collection within the study was limited as the questionnaire could not be sent prior to the participants completing the OSCE assessment and the students were going on an elective placement immediately after the assessment with potentially limited access to their emails. It was decided to send the email a week before the students were due to return to university for the final weeks of their course, anticipating they would be checking their accounts for information about the final weeks and, consequently, would see, and be able to respond to, the study invitation.

The initial response rate to survey was poor, only 4 being received in the first two weeks, but it is well documented that response rates for any form of questionnaire can be low (Sue and Ritter, 2012; Cohen et al, 2011; Murray, 1999) although online questionnaires do have a higher response rate than postal questionnaires (Stacey and Vincent, 2011). The email was resent to all respondents as anonymity made it impossible to see who had completed the questionnaire and who had not (Cohen et al, 2011). Colleagues of the researcher also reminded the students about the study, some mentioning it during tutorials, while hard copies of the invitation and initial email were available for students to take away. Sue and Ritter (2012) argue that personalising the questionnaire and study through direct communication can assist in participant engagement. The researcher did not speak to the students about the study unless contacted directly by an individual (Fuller et al, 2004), thereby complying with ethical procedures and avoiding the risk of coercion (Cohen et al, 2011). The combination of recruitment methods increased the uptake significantly (Sue and Ritter, 2012) with a total of 12 out of a possible 24 students responding to the questionnaire, a 50% response rate. This response rate was higher than initially expected and, while it would have been pleasing to receive responses from more students, any questionnaire is dependent on respondents wishing to complete it (Cohen et al, 2011), something outside the researcher's control.

3.7.6: Semi-structured interviews

The second method of data collection for this study was the semi-structured interview, one of the most common methods in qualitative research (Green and Thorogood, 2014; Bryman, 2006) for capturing the experiences, perceptions and participants' own understanding and narratives of the concept being studied (Creswell and Plano Clark, 2011; Clarke, 1999; Patton, 1990). The semi-structured interview allows the interviewer to have a wide-ranging schedule to follow when conducting the interview. Vahasantanen and Saarinen (2012) suggest that the semi-structured interview, as opposed to the unstructured interview, allows participants to articulate their views to the researcher with some standardisation to ensure all questions are asked to prevent issues arising around unusable data generation (Maykut and Morehouse, 2001) and comparability of the interviews at the point of analysis (Green and Thorogood, 2014; Cohen et al, 2011; White and Brew, 2011). Indeed, participants have sometimes identified the interview experience as cathartic, empowering and therapeutic (Wolgemuth et al, 2015) since it makes them the subject rather than the object in a study, which, as Cappello (2005) argues, can disempower them.

Although a widely used research tool (Varga-Atkins, 2009), the semi-structured interview is not without its problems. For example, there may be issues around power dynamics between the researcher and participant (Clarke-Ibanez, 2004). Dell Clark (1999) argues the researcher needs to empower and respect participants when using this method in order to achieve rich data for the study as it is well recognised that semi-structured interviews can induce feelings of anxiety or self-worthlessness, of being 'put on the spot' or of being tested (Barton, 2015; Schulze, 2007). It is these feelings, the awkward silences or constrained answering by the participant (Lampropoulou and Myers, 2013; Schulze, 2007) that can prevent a researcher gaining the required depth of data from a semi-structured interview.

Interviews also rely on participants' levels of linguistic communication, cognition (Dell Clark, 1999; Clark-Ibanez, 2004) and memory of an experience or topic (Barton, 2015). Although Dell Clark (1999) and Clark-Ibanez (2004) are looking

at studies involving children, the principles behind interviews (the ability to remember and recall information, understand the questions being asked and verbally communicate answers) apply to any group of participants, but may be particularly significant when participants have learning difficulties such as dyslexia. Depending on the underlying problem, a person with dyslexia may have problems with memory, recall, verbal communication, language and processing so a semi-structured interview may hold challenges for the interviewer (Dell Clark, 1999 and Clark-Ibanez, 2004). As Barton (2015) states, the willingness and ability of the participants to be involved in the interview has to be carefully considered by the researcher before adopting this, or any method of data collection, as, without the participants, there is no study. It is these areas of concern, expressed by Dell Clark (1999) and Clark-Ibanez (2004) and also Wolgemuth et al. (2015), that researchers need to bear in mind in order to maximise the benefits of semi-structured interviews. Seeking out opportunities and strategies that might enable and encourage participants to talk in depth about their experience, feelings and perceptions, led to the idea of using elicitation techniques within the interviews in this study.

3.7.7: Elicitation techniques

Elicitation is a qualitative research technique, involving the use of artefacts such as photographs to assist in facilitating conversations which may be difficult to develop in a formal interview - for example, when investigating tacit knowledge or issues that discuss identity or conceptual understandings (Barton, 2015). There is no single, authoritative definition of elicitation; the concept refers to the use of visual, verbal or written stimuli that encourage people to share their ideas (Barton, 2015), which help to bridge the gulf separating researchers, educators and students (Torre and Murphy, 2015). It allows researchers to understand less visible dimensions of a subject (Torre and Murphy, 2015) by using stimuli to focus the interview (Harper, 2002). The use of visual stimuli empowers participants (Barton, 2015; Torre and Murphy, 2015; Liebenberg et al, 2014; Firth and Harcourt, 2007; Clark-Ibanez, 2004; Dell Clark, 1999), shifting the power from researcher to participant and encouraging the sharing of information (Torre and Murphy, 2015; Clark-Ibanez, 2004). Torre and Murphy (2015), Liebenberg et al. (2014), Clark-Ibanez (2004) and Dell Clark (1999) and argue

that the use of visual stimuli is an ethical research practice that creates trust between researcher and participant.

Direct questioning interviews generate data, but elicitation interviews may yield different (Cappello, 2005), wider ranging data that open up different ideas and information from participants (Croghan et al, 2008; Frith and Harcourt, 2007). Such interviews can elicit more concrete information or evoke a multi-layered response from participants, which, perhaps, is the intended purpose of the research interview. Croghan et al. (2008) further contend that elicitation can also assist in gaining insight into others' perspectives and open up internal worlds and interpretations that otherwise may not be seen (Stockall, 2013). Elicitation techniques can illuminate dynamics and insights, which may not be found if another data collection method is used (Clark-Ibanez, 2004). Allowing participants to contribute to the research process (in this case by bringing representative visual stimuli) enables them to feel grounded in their own experiences and, consequently, ideas and alternative perspectives emerge which may not have become apparent through a question-only interview (Barton, 2015). Barton (2015) and Frith and Harcourt (2007) argue that such methods provide useful alternatives to direct questioning about participants' thinking, the visual aid being a reference point for conversations, triggering memories or thoughts during the interview process rather than an objective representation of reality that has a meaning independent of the conversation (Schulze, 2007; Cappello, 2005).

The use of visual stimuli within interviews evokes a deeper consciousness than words alone as the brain has to process images and words, allowing more, and also different, information to be recalled by the participant (Harper, 2002), deeper reflection (Frith and Harcourt, 2007; Liebenberg et al, 2014), richer answers to questions (Barton, 2015; and Frith and Harcourt, 2007) and, as Cappello (2005, p172) suggests, it "shatters the composure of a guarded reply" as it takes the emphasis away from the participant to the visual stimuli and often speeds up researcher - participant interaction (Schulze, 2007; Dell Clark, 1999). Clark- Ibanez (2004) considers elicitation interviews help capture the tangible and intangible aspects of participants' lives. In fact, the use of visual aids in an

interview can assist in showing hidden aspects of a participant's identity and may reveal unconscious perceptions held by individuals (Harper, 2002; Schulze, 2007). Consequently, participants' voices, feelings and ideas are accessed more readily by the researcher (Barton, 2015; White and Drew, 2011; Liebenberg et al, 2014).

In her study on the use of photo interviewing with children, Chappelle (2005) argues that visual stimuli can be shared and can assist in creating a common basis for discussion. She suggests that children often struggle with language and memory when asked direct questions and that photo interviews assist individuals who respond to visual rather than lexical prompts (Cappello, 2005), a point which may be applicable to this study's population, some of whom may have a form of dyslexia that causes recall, memory and verbal articulation to be difficult and stressful. As Torre and Murphy (2015) argue, photographs can be powerful tools for eliciting responses in an interview.

The issue of trustworthiness is briefly mentioned in the research papers around elicitation. Torre and Murphy (2015) argue that elicitation techniques enhance the trustworthiness of collected data as they demonstrate the participants' own understanding of a subject through the object or photograph they bring to a study. They argue that this then demonstrates the participants' way of knowing and understanding rather than the researcher's, which, as Guba and Lincoln (1994) suggest, enhances the authenticity of the collected data.

The majority of papers, however, analyse the use of photographs as a data generating tool (Torre and Murphy, 2015; Schulze, 2007) whereas this study uses the object simply to engage participants in the interview process; it is the response and information gained from the interview questions that are analysed. In any case, it is important to be aware that, while elicitation is a method that gives students a voice and helps educationalists to understand the context of the subject under study through their eyes, visual stimuli may evoke strong emotions, feelings and experiences in participants (Barton, 2015; Harper, 2002; Torre and Murphy, 2015). Indeed, it was with the intention of understanding the OSCE assessment through the eyes of the students with

dyslexia, that the semi-structured interview, enhanced by the use of object elicitation, was considered for this study, students being asked to bring an object that represented their OSCE experience to the interview.

3.7.8: The pilot of the object elicitation semi-structured interviews

The object elicitation, semi-structured interviews were piloted, prior to the commencing data collection, to test the interview schedule, flow of questions, participant understanding of the questions, integration of the object elicitation aspect of the interview, time scale for the interview and the recording device to be used. It is important to trial the process in order to ensure the schedule is appropriate and works; indeed, good preparation influences the quality of data collected during the 'live' process (Punch and Oancea, 2014). Green and Thorogood (2014) support this view, stating the schedule feasibility needs to be tested to uncover potential problems prior to implementation which assists in enhancing the trustworthiness and authenticity of generated data. A colleague with dyslexia, and prior experience of undertaking OSCE assessments, agreed to trial the interview schedule and gave verbal consent for it to be recorded while a second colleague, with experience of research interviewing, observed the interview. After the interview, both colleagues offered feedback and suggestions about how the interview had run.

The feedback identified some pertinent points. The start of the interview had not been considered as part of the process. It was suggested a checklist be used prior to the interview commencing to ensure a consistent process was followed and all significant areas were covered (Parahoo, 2006). The question of recording devices was also highlighted. It was suggested that two devices be used in case one failed to record, and that each be tested before every interview. Punch and Oancea (2014) argue that testing recording devices, ensuring knowledge of how equipment works and positioning it to ensure clear capture of data without intimidating the interviewee are essential steps for a well-conducted interview. Identification of the recordings after the interviews was highlighted as important (Punch and Oancea, 2014). It was suggested the code given to participants on completing the questionnaire should follow them through to the interview as a way of ensuring triangulation of both data sets for

each participant. This would not breach confidentiality as the interview participants' contact details would be given at the end of the questionnaire, implying consent to be identified (Muldoon et al, 2014).

The structure and flow of the questions is of great importance within a semi-structured interview (Green and Thorogood, 2014; Cohen et al, 2011). In this instance, the question schedule did not appear to flow smoothly. Because the researcher was embedded in the design of the study, it was difficult to envisage how to reorganise the questions. The critic, however, was able to offer impartial ideas about the flow and structure, and suggested putting the questions into separate blocks for each theme, which would help interviewees understand how the interview was to be structured, reducing any anxiety on their part (Punch and Oancea, 2014), and assisting the interviewer to stay within the semi-structured schedule and not lose the thread of the interview (Punch and Oancea, 2014; Cohen et al, 2011). This thematic structure was subsequently adopted within the semi-structured interview schedule (see appendix six, interview check list and schedule).

The question of the object elicitation was also considered. Each interviewee was asked to bring something that represented the OSCE experience to the interview. An example of an object for an engineering student was given: a piece of Lego. The object was introduced at the start of the pilot interview, but led to the interviewee discussing the relationship between the object and their experiences and feelings. The interviewee stated she did not know what was being asked and felt she was "ranting on". As the interviewer, I also felt that there was no structure to the interview and, at times, lost the thread. Subsequently, the critic, interviewee and interviewer discussed the timing of the object inclusion. It was seen as beneficial part of the interview because, as the interviewee identified, it diverted attention from her as the interviewee to the object, and appeared to bring out deeper and different feelings and discussion about the OSCE experience. With the potential for triggering an emotional response it was thought that the Disability Service Manager should be informed that students may access support following the interview. It was suggested that the object be introduced at the start of the interview and then referred to at the

end of each block of questions to ensure some structure be maintained but also allowing further explanation or discussion on the topics covered in that section (Green and Thorogood, 2014).

3.7.9: The object elicitation semi-structured interviews

The object elicitation semi-structured interview was the second phase of the data collection process following on from the completion of the questionnaire. Following the pilot interview, I considered the comments and initiated changes to the process and design of the interview (Punch and Oancea, 2014). The introduction of a checklist for the start of the interview process was designed to assist the interviewer in conducting the interview (Parahoo, 2006) and to ensure areas such as giving information about the study, consent to recording and use of data and withdrawal of consent were discussed with the interviewee prior to commencing the interview (see appendix seven, information and consent form for research). This allowed both the interviewer and interviewee to be aware of the processes and structure of the interview, which, as Vahasantanen and Saarinen (2012) suggest, helps with 'setting the stage' for the interview and establishing rapport and the tone of the interview. The interview schedule was also re-designed to ensure a structure was present so that the participants knew how the interview would flow, and to assist the interviewer in keeping within the schedule, not losing the thread of the interview (Punch and Oancea, 2014). The study interview schedule was redesigned into identifiable topics, which aided the flow of the interview (see appendix six, interview checklist and schedule). The use of an object in the interview had also been discussed after the pilot interview. It was seen as a useful and worthwhile part of the interview by the interviewee but it needed to be incorporated in a structured way to be beneficial within the process. The object was consequently introduced at the start of the interview and then the interviewer incorporated it into each topic area within the interview.

3.7.10: Interview questions

The interview questions were framed to reflect the objectives of the research question to ensure relevant data was collected (Cohen et al, 2011). The questions were linked to the literature (see appendix three, research papers

used for the questionnaire) and to parts of the original questionnaire to integrate the questionnaire data and for clarification and increased understanding of given information (Arnon and Reichel, 2009).

Open-ended questions were framed for the interview as they encourage co-operation and the establishment of rapport between the interviewer and interviewee (Cohen et al, 2011). Open formatted questions may be less alarming for the interviewee. They allow, it is argued, freer answers (Arnon and Reichel, 2009); therefore, greater information is gleaned from them Cohen et al. (2011). In depth understanding and authentic information is gained as questions formatted towards description, experience and perceptions can be used (Cohen et al, 2011). Green and Thorogood (2014) and Irvine et al. (2013) suggest that open-ended questions are effective in generating rich and unique data on the research topic. It is acknowledged, however, that there are times when respondents do not wish to answer the questions, or give answers not related to the question posed if, for example, they want to express a certain opinion (Jacobsson and Akerstrom, 2012). Interviewers need to be aware of this and have strategies in place to return the interviewee to the particular question. The use of open-ended questions allows the interviewer to clarify and probe interviewee responses (Vahasantanen and Saarinen, 2012) but the amount and equality of the probing across all interviews must be acknowledged as researcher interaction may influence the responses from the interviewee (Jacobsson and Akerstorm, 2012).

Wording of the questions was also considered carefully as the meaning of words or terms can differ between the researcher and the participant (Green and Thorogood, 2014; Parahoo, 2006) with Cohen et al. (2011) suggesting that questions are kept simple, use non- prejudicial language, avoid ambiguity and address one point at a time, which, they argue assists with recall (Cohen et al, 2011). In this study, the semi-structured interview was split into small sections, each addressing a different part of the OSCE assessment and the language used was carefully considered.

The open-ended questions within the study were grouped into topics. The initial questions were linked back to the questionnaire responses concerning the participants' dyslexia and then the format followed a pattern that related to the OSCE assessment process. The interview took the interviewee through the process of the assessment from preparation for the OSCE, the assessment process and then to the present time. This format appeared to allow the interview to flow smoothly and to consider all aspects of the OSCE assessment process in a logical order. It enabled the participant to visualise the whole process of the OSCE assessment and structured the interview into specific topic areas to assist participants with memory and recall problems to recall information and remember experiences (Dell Clark, 1999; Clark-Ibanez, 2004). Green and Thorogood (2014) also state that social context and sensitivity to individuals are necessities during the interview process to ensure participants feel comfortable to talk. This was important for this study as the participants, having an underlying learning difficulty - dyslexia - might be sensitive about their difficulty. The researcher had no knowledge of the effects of dyslexia on the individual participants prior to the interview.

3.7.11: Execution of the object elicitation semi-structured interview

Participants who had agreed to the interview stage of the study and provided contact details at the end of the questionnaire received a personalised email from the researcher asking them to provide some dates and times convenient to them for their interviews (Parahoo, 2006).

All participants stated they were happy to be interviewed within the university setting. A light, quiet study room away from the main classrooms was booked as suggested by Irvine et al. (2013). Participants were informed that an interview would probably last between 30–60 minutes; in reality most lasted between 30-45 minutes.

Collaboration between researcher and participant is essential when conducting any type of interview (Knight, 2002). Irvine et al. (2013) suggest that it should be as natural an encounter as possible and that the face-to-face interviewer should ensure a rapport is developed. This raised the issue of potential power

imbalance between the participants and the researcher, as the latter is a senior lecturer within the university. This had the potential to affect participants' responses and the integrity of the information, often an issue when conducting interviews in one's own establishment using this data collection method (Vahasantanen and Saarinen, 2012). The interviewer, in fact, had taught and examined all the participants in previous encounters and, therefore, did not want them to feel the interview was a formal meeting as this might affect the information achieved from the interview.

Vahasantanen and Saarinen (2012) suggest the researcher should create a sense of togetherness and ensure the interview is a co-constructive process between the researcher and participants to ensure relevant, rich data is collected (Jacobsson and Akerstrom, 2012). This was essential in this study since data generated from each encounter was fundamental to the study. It was particularly important, therefore, that a relaxed relationship was created. The interviewer met the participants in an agreed place, talking to them about general topics whilst walking to the interview room (Irvine et al, 2013) where they were thanked for coming and asked to make themselves comfortable. The researcher then discussed the study with them, outlining its aims and objectives. The information sheet and consent form were distributed. In one case, the student requested the researcher read the form aloud as they had underlying problems with reading; the five other participants were able to read the consent form themselves. All participants signed two consent forms, keeping one copy themselves, the researcher keeping the other. The researcher reiterated that, even after consent, the participants could ask to withdraw from the study at any point and any data collected from them would be destroyed (Pilot et al, 2001).

The interviews were recorded on both a multi-media phone and an iPad, where free recording applications were available. The phone recordings were the clearer of the two and were transferred to Dropbox for safe storing prior to transcribing. All data was then erased from the devices to comply with data protection and ethics (Parahoo, 2006). The interviews were coded using the participant number generated by the Bristol Online Survey site to ensure

anonymity and that the correct questionnaire was linked to the corresponding interview during the analysis stage of the study.

Interviews were then conducted using the semi-structured interview schedule (see appendix six, interview check list and schedule). The questionnaire was incorporated at the start of each interview to enable the researcher to clarify the answers given by each participant, and allow the latter to expand on specific questions, generating more detail and insight into a topic for the researcher and, consequently, richer data. The questionnaire was also referred to later on when discussing how dyslexia affected the participant and the methods they used for revising for the OSCE. Integrating the questionnaire not only allowed insight into each participant, but also demonstrated that answers given there had been read and considered prior to the interview stage.

The use of object elicitation formed part of the interview process. The participant was asked if they had brought an object that represented their experience of the OSCE. Six of the seven participants brought an object: one participant had intended bringing an object but forgot so they described the object instead. All the objects were different. The objects were integrated into the interviews at the start of each section of the interview schedule. Their use appeared to reveal aspects of each participant's identity and perceptions (Harper, 2002) and assist consideration of their dyslexia and the OSCE assessment. They generated discussion and transferred the emphasis of the interview from the participant to the object (Torre and Murphy, 2015), which appeared to help develop a more relaxed researcher - participant relationship, which, in turn, generated more detailed, richer and in-depth data during the interview (Torre and Murphy, 2015). The object was also useful as a prompt/ stimulus for the participant if there was a long pause during the interview (Capello, 2005). The researcher ended every interview by thanking the participant and asking if they would like to see the transcripts, once completed, to check for accuracy. None asked to see the transcripts, but all were interested in receiving a copy of the study's findings once written up. It was agreed this would be via personal contact details, as participants would no

longer have university email accounts, having completed their course, and the meeting was concluded.

The interview recordings were immediately checked to ensure they had recorded on both devices and were audible and then transferred to audio files compatible with an outside transcriber's equipment and sent via Dropbox to the transcriber. This complied with ethics and data protection issues for sending sensitive data to others. The completed transcripts were checked on receipt against the recordings to ensure accuracy of transcription. Any parts of the transcripts the transcriber was unsure about were highlighted and reviewed against the audio recording and gaps were filled in. Most of the gaps were due to nursing terminology or abbreviations that the transcriber was unfamiliar with. This started the process of becoming embedded in the data.

In summary, there was a 50% response rate for the questionnaire phase of the study. The numbers for the interview phase were smaller, as had been expected. Initially, seven students expressed an interest in participating in the interviews, but, due to geographical location and changes in personal circumstances, one student was not able to participate in the interview phase. Table 2 presents the number of participants at each stage of the study.

Table 2: Number of participants for each stage

Study Phase	Number of participants
Questionnaires	12/24
Interviews	6/24

3.8: Data Analysis

The process of analysis depends on the type of data collected and the underlying methodology of the study. This study used a two-phase mixed method approach and data was integrated in the analysis stage to demonstrate findings (Niglas, 2010).

3.8.1: Questionnaire data analysis

The online survey site collected the questionnaire data as individual responses and cumulative answers for each question. The site allowed data to be

downloaded in different formats (such as tables and graphs) to show the response to each question and all written comments were included. This allowed the data to be seen as a whole data set as well as individual responses. The questionnaire responses were integrated into the findings and collated as descriptive data tables. All responses were also merged into the thematic analysis to ensure all participants' responses were represented throughout the analysis.

3.8.2: Qualitative data analysis - The 'Framework' Tool

The 'Framework' method of data analysis, created by Ritchie and Spencer (1994) is a generic and versatile method of qualitative data analysis rather than technical and specific (Brunt and Courtney, 1999). The 'Framework' method can be applied to most qualitative research studies as it provides a structure rather than a philosophical approach to data analysis (Smith et al, 2011; Srivastava and Thomson, 2009; Brunt and Courtney, 1999).

The 'Framework' tool has five stages, which the researcher applies to the data generated during the data collection stage of the study. This allows for deep exploration, investigation and contextualisation of the collected data, and also provides an accessible, documented analytical record of data analysis (Ritchie and Spencer, 1994) as table 3 demonstrates.

Table 3: The Framework Tool (Ritchie and Spencer, 1994)

The Framework Tool – 5 Stages of Data Analysis

Step 1: Achieving familiarity with the data

Step 2: Identifying themes from the raw data and the setting up of a thematic framework

Step 3: Indexing the raw data according to the thematic framework

Step 4: Charting data under themes

Step 5: Interpreting and mapping data against themes and original research objectives

The structured method allows the researcher to become immersed in the data (Furber, 2010) and also allows the qualitative data from the questionnaire to be integrated within the interview data to increase understanding and contextualisation of all data collected (Srivastava and Thomson, 2009). It is also

possible to go back to the original data for confirmation and clarification at any stage of the analysis process (Ward et al, 2013; Smith et al, 2011; Furber, 2010; Ritchie and Spencer, 1994). This was important in this study where the two methods of data collection were integrated during this phase. The data from the questionnaire had been collected from 12 participants of whom 6 agreed to be interviewed. Consequently, some of the qualitative data from the questionnaire represented views of different participants from those taking part in the interviews; nevertheless, it was still essential data that needed integrating into the overall data analysis.

3.9: The analysis process

The 'Framework' structure was implemented, as detailed below. The participant codes generated by the questionnaire were felt to de-personalise the data, removing its individuality; therefore, each participant was given a gender-neutral pseudonym linked to the first letter of their object, to assist the researcher in identifying their data and ensuring anonymity for the sole male participant. These pseudonyms followed through the data analysis process and into the findings chapter.

3.9.1: Step 1: Familiarisation

The first stage of data analysis of the interview transcripts was to become immersed in the data (Smith et al, 2011; Furber, 2010), which was particularly important, as transcription had been carried out by a third party. Srivastava and Thomson (2009) suggest this stage of analysis allows for the different data sets to be brought together and ideas and recurrent themes to be identified. During this stage, not all data scripts need to be looked at (Ward et al, 2013; Pope et al, 2000), but, in their use of the 'Framework' tool, Ward et al. (2013) argue that reviewing all transcripts and data sets in smaller samples allows for a more complete process. All transcripts and recordings in the study were reviewed to ensure full immersion in the data (Ward et al, 2013).

3.9.2: Step 2 and Step 3: Identifying a thematic framework and indexing

The 'Framework' method suggests identification of themes from the raw data and the indexing of raw data as two separate stages in the data analysis

process. In this study, however, the two stages became merged because of the influence of the interview questions and initial study questions on the data interpretation.

This influence is part of the process at this stage (Srivastava and Thomson, 2009; Richie and Spencer, 1994) but the linear, sequential nature of these stages was found to be limiting in this part of the analysis. Flexible interpretation of these two stages enabled forward and backward movement between the stages and the data, resulting in the development of initial themes. Srivastava and Thomson (2009) discuss the importance of allowing the data to dictate the themes and issues but acknowledge that prior issues or questions may influence the thematic framework. Richie and Spencer (1994) also acknowledge this, but consider it is only tentative and refinement can occur in subsequent stages of the analysis.

Eight themes were initially identified, but in order to see the data without the influence of the study questions and interviews, interview responses were transcribed onto grids under the initial identified themes, rather than indexed on the transcripts. This allowed all data on a theme to be viewed together and made it easier to move between (see appendix eight, data sheet one) (Ward et al, 2011). Direct quotes were copied from each participant's transcript onto the grids and the transcript line number placed next to the text, rather than using theme index codes as suggested by Richie and Spencer (1994). Once all transcripts had been reviewed and transferred to the grid, initial ideas about meaning were considered and recorded for each participant within each theme.

Some of the themes were short and ideas and key words easier to find - for example "patterns of diagnosis". Data concerning the OSCE were harder to breakdown, even on the grids. A 'messy' mind map of initial thoughts on meaning was created separately and key points were documented under each theme (see appendix nine, data sheet two). Initially, eleven themes were found within this section of data, which were then reduced to eight and used as part of the initial themes on the data grids. Moving away from linear charts to messy mind maps, although time consuming as careful cross-checking between

transcripts, grids and mind map was vital (Smith et al, 2011), allowed the data to 'talk' and show its meaning (Srivastava and Thomson, 2009).

The data from each theme grid were then cross-examined. Key themes emerged, with some being directly related to the main theme and others interlinked to become new themes. At this stage, objects brought to the interviews and relevant to the theme were noted next to participant number. These thematic grids were scrutinised again, initial themes being noted in the final column on the grid (see appendix eight, data sheet one.) and then transcribed onto new grids, which allowed them to be seen independently of the data. Sub-themes were then crossed referenced with the original grids 'what does this mean' section and recorded. As Furber (2010) and Srivastava and Thomson (2009) suggest, the indexing phase of analysis may require the thematic framework to be refined as it is not a mechanical process but one that requires logic and intuitive thinking. Once the sub-themes had been transposed onto the grid, the initial themes and sub-themes were reconsidered alongside the topic grids. Main themes were now identified and recorded.

A further grid was then devised which identified the final themes (see appendix ten, main themes after initial analysis). As Richie and Spencer (1994) discuss, it is not unusual for themes and sub-themes to be merged and reshuffled as analysis progresses. These themes were listed and cross-referenced again with the initial grids. Although some data around direct thoughts linked all the themes, two final themes were identified. It was identification of these final themes that allowed the data analysis to move forward to the charting stage.

3.9.3: Step 4: Charting

Once the final themes and subthemes had been identified and applied to the individual interview data, the relevant qualitative and quantitative questionnaire data was then considered and linked into the themes. The question numbers were noted next to the themes for easy cross-referencing. A picture began to form (Richie and Spencer, 1994) (see appendix eleven, data sheet three).

The first stage of charting was completed as individual cases to ensure the participant's voice was central to the data and to build individual profiles for each participant. A chart for each theme was constructed with data from each participant summarised under each sub-theme (see appendix twelve, example of charting). This data was charted under the two main themes for each participant under their individual profile code. The object brought to the interview was also noted along with relevant material from the participant's transcripts and answer from the questionnaire. Cross-referencing between topics and the theme grids as well as the original transcripts ensured the accuracy of the writing up process. This pattern was followed for all six interview participants.

3.9.4: Step 5 – Interpreting and mapping

Themes and sub-themes were then compared to see if any further changes were required. It became apparent that some themes could be merged further as they appeared to be similar. For example, labelling and identity around 'opinion of dyslexia' and 'how dyslexia affects me' were merged to the sub-theme 'identity'. Some of the data within the original themes of identity and labelling were similar to that seen in theme 'learning for assessment' as were data around 'opinion of learning methods' and how 'dyslexia effects learning'. This information was merged to the subtheme 'learning for assessment'. The data around effects of the OSCE on the person was identified in two separate themes, which were merged under 'assessment effect on person' (see appendix thirteen, interpretation and mapping: changes to themes).

The original transcripts and audio recordings and participant profiles were crossed referenced with the thematic charts to ensure appropriate context had been achieved throughout.

3.10: Ethical Considerations

Ethical implications are an integral part of the research process and must be acknowledged, addressed and approved prior to commencement of any study. The legal, moral and personal rights of participants must be considered when completing any research (Polit et al, 2001; Burns, 2002), and have been in this

study. Since this study was concentrating on students with dyslexia attending university, ethical approval for their participation had to be sought from the study site as well as the university under which the research was supervised.

Independent consideration of ethical protection of participants was sought from;

- Graduate School of Education Ethics Committee - Exeter University (March, 2016) (see appendix fourteen, certificate of ethical approval; Exeter University)
- University Research Ethics Committee- Study site (May, 2016) (see appendix fifteen, London South Bank University; ethics committee letter)

Permission was also obtained from the study site university's Head of Department and also from the Disability Service Manager, and two academic supervisors oversaw the study.

The ethical process needs to be active, as unexpected ethical dilemmas may emerge (Field and Morse, 1992). This means that critical reflection and supervision of the study's conduct is essential to identify any such areas. Although the two ethics committees stated above have approved the study, I am ultimately responsible for protecting participants and data (Orb et al, 2001). The ethical principles of autonomy, beneficence and non-maleficence are considered below (Health Research Authority, 2017; British Education Research Authority, 2011).

3.10.1: Autonomy

Conducting research in one's own organisation has been labelled backyard research requiring careful consideration of power issues and disclosure (Cohen et al, 2011). Strategies were implemented to reduce the risk of coercion; for example, the Disability Service Manager and colleagues, rather than the researcher, approached the students. Participation in either phase of the study was optional without any positive or negative coercion, thereby respecting the participants' right to self determination (Polit et al, 2001).

The Head of Department and the Disability Service Manager acted as “gate keepers” for ethical considerations of the study site (Robson, 2002). Potential participants were all sent an initial email (see appendix five, recruitment email for the online questionnaire) inviting them to participate in the first phase of the study. The email introduced the study giving information on:-

- how the first phase would be conducted
- confidentiality,
- storage of the data
- how to obtain further information about the study
- contact details of myself and my lead academic supervisor.

Participants who agreed to participate in the second phase of the study received an additional information sheet about the interview stage which addressed the same points as discussed above but with details about recording each interview see appendix seven, information sheet and consent form for research).

The participants were recruited for the questionnaire via the Disability Service Manager who held the list of students registered with dyslexia and sent them the email invitation. Twenty-four email invitations were sent out initially and were re-sent at a later date. The participants were invited to contact the researcher, or the researcher’s supervisor, if they required further information on the study.

Participation in the interviews was voluntary and the student, by providing contact details on the questionnaire, agreed the researcher could approach them. The students were then given a full information sheet and spoken to confidentially about the study so they could make an informed decision about participating in the interview.

Verbal and written consent was ensured for each method of data collection. Implied consent for the data to be used was given through the voluntary completion and submission of the questionnaire (Sue and Ritter, 2012; Pilot et al, 2001). Full written consent to record the interview and use the data was gained prior to the interview commencing and, again, at the end of the

interview. Participants were assured of their right to withdraw from the study at any stage without fear of judgement or discrimination (Pilot et al, 2001). If withdrawal was requested, then all data would be removed from the study and destroyed.

Anonymity of the participants and confidentiality of the collected data are essential when feelings and views of participants are being exposed. The questionnaire data was anonymised by the online survey programme, which gave each completed questionnaire a numerical code, eliminating any identifying material. Any descriptive excerpts used from the questionnaire were given pseudonyms (Orb et al, 2001).

The face-to-face interview phase of the study precluded participants from being anonymous and it was essential, therefore, that there be a professional relationship between the participant and myself. Reassurance that the views and feelings articulated throughout the interview would remain confidential, and would be anonymised within the study, was given to the participants.

Pseudonyms were used for descriptive excerpts included in the study findings. To ensure the anonymity of the participants and the confidentiality of the data had not been breached, a review of all quotations to be used was conducted by my academic supervisors. All data and transcripts were stored securely on the online survey programme, which is password protected, and electronic data from the interviews was stored on Dropbox, also password protected, thus complying with the Data Protection Act (1998).

3.10.2: Beneficence

The literature addressing OSCE assessments and students with dyslexia and disabilities reveals a possible gap in this area (Chapter two). Participants were given the opportunity to discuss the perceived benefits of enrolling on the study whose findings are, it is anticipated, likely to improve the OSCE assessment strategy for all students not just those with dyslexia as well as the overall assessment process in the department.

3.10.3: Non- Maleficence

In all research studies, the principle of preventing harm to the participants is paramount. The most likely causes are: breaches in confidentiality, coercion and non-maleficence. Qualitative interviewing and the unknown trigger of emotions are also potential sources of these (Polit et al, 2001). Participants may use the research setting as a way of addressing feelings related to the subject (Hutchinson et al, 1994). It was necessary, therefore, to be sensitive to participants, weighing up the possible outcomes of data generation against potential harm to the participant when deciding to continue with data collection (Hutchinson et al, 1994). All participants were given information prior to the commencement of the study and support services were available within the university if required. No participant demonstrated distress during the interview phase and all were offered a debrief after the interview and were encouraged to voice any concerns they had either about the study or about issues raised within the interview. Participants were offered access to their transcripts to check for accuracy and confidentiality, but none took advantage of this.

3.10.4: Integrity and trustworthiness

In qualitative research, the issues of data integrity and trustworthiness need to be addressed. Guba and Lincoln (1994) suggest the data generated from a study needs to be seen as credible, dependable, confirmable, transferable and authentic so others can follow the study methods and conclusions, and the findings can be used to direct future studies. It is acknowledged, within qualitative research, that data is unique and derived from participants' perceptions and experiences, and also researcher interpretation. This makes the data analysis process difficult to replicate although steps can be taken to ensure the integrity of the study and its findings.

In this study credibility and dependability were ensured through the researcher describing their position and any influence throughout the interview and data interpretation within the study and through the detailed description of the data collection methods (Parahoo, 2006). The piloting of the research tools, and final data collection methods are also discussed and presented to the reader. A detailed description of the analysis stages of the study alongside presentation

of the data sheets (Clark, 1999) have also been included. The data sheets were reviewed by my supervisors to ensure interpretation of data was true to the original data transcripts (Clarke, 1999).

The concept of confirmability was addressed through the detailed description of the analysis process and also through the use of direct and rich quotations when presenting the findings to the reader. Transferability, it is argued, can be achieved through sufficient information being given about the participants and the research context (Cope, 2014). This was demonstrated within the study through the development of the participants' profiles which gave greater information on the study participants to the reader. This can assist the reader in developing their understanding of the study individuals (Cope, 2014). Through the use of description and direct quotations, the reader, is also able to develop meaning and understanding of the generated data, potentially enabling them to relate the results to their own experiences.

The final criteria suggested by Guba and Lincoln (1994) is authenticity of the generated data. In this study the data was directly quoted from the interview transcripts, using the participants' own language and expressions within the presented profiles and themes to personalise the findings. This as Cope (2014) and Guba and Lincoln (1994) argue, enables readers to grasp the essence of the participants' experiences and therefore authenticate the data.

This chapter has discussed the methodology, sampling and methods of the current study. The discussion has considered the use of online questionnaires and elicitation interviews as data collection tools within a mixed method study. The study aims and objectives have been presented and the analytical framework critically considered in relation to this study. Integrity of the study design and data analysis have been considered alongside the ethical considerations of conducting this research study. The following chapter will now present the findings from collected data.

Chapter Four: Findings

4.1: Introduction

The questionnaire and object elicitation semi-structured interviews generated qualitative data from students with dyslexia. This chapter focuses on the findings emerging from the data about students' perceptions and experiences of the OSCE assessment and recommendations for change.

The data from the questionnaires and interviews was merged during the analysis process, as discussed in the previous chapter, and are presented as descriptive figures and original narrative. In order to enable a holistic, less fragmented presentation of each participant, the data was presented as individual participant profiles and in themes. The excerpts quoted, in both the profiles and within the thematic presentation, use participant's own words, grammar, and are presented in sufficient length to represent the views of each participant fully, offering, therefore, a rich account for the reader. As explained in the previous chapter, gender-neutral pseudonyms have been used to maintain anonymity of the interviewees. The words 'their or they' are also used instead of 'he and she' to protect identities but it is recognised this may cause some grammatical inaccuracies in places.

The study contains information obtained from a sample of participants with dyslexia who had undertaken the OSCE assessment and was verified by biographical and background data acquired at the start of the questionnaire and the interview. The participants were aged between 18 and 30, the majority being between 22 and 25, which is the main age group in undergraduate nursing.

Participants in the study were mainly female (11) with only one male participant. This is representative of the gender of participants undertaking a Children's Nursing degree in the study setting where there is an average of three male students per cohort of 170. Within the cohort under study, there was only one male student registered as having dyslexia.

Following the analysis of the questionnaire and interview data, three main themes were identified with sub-themes identified within each. The first theme identified concerned the *impact of dyslexia on the individual*. The *diagnosis of dyslexia* and the *impact on the individual* were topics that appeared important to all participants and underpinned their perceptions and experiences of the OSCE. The second theme involved the *OSCE* as an assessment process and the third theme considered recommendations for the future.

During the analysis stage, the individual stories shone through and are presented here as profiles, with an illustration of their object, to demonstrate the journey of each interviewee. I would like to introduce Pat, Frankie, Chris, Tyler, Charlie and Paris, all participants with dyslexia who have undertaken the OSCE assessment as part of their undergraduate nursing degree.

4.2: Individual Profiles

Pat

Pat, in the 22-25 age bracket at the time of the interview, was diagnosed with dyslexia in year one of the undergraduate Children's Nursing degree. During Pat's school years, dyslexia had been an underlying problem but Pat did not want to "have it due to the stigma attached to it". On starting university, Pat still did not want to "have it" but realised there was help and wanted to take all the support available so self-presented for testing. Pat feels it is easier being diagnosed as an adult because you are in charge of your own learning and you are doing it for your own benefit, whereas at school Pat wasn't ready to be separated from friends. Physical separation from friends during exams is still an issue, but Pat is "over it" and it "doesn't bother" Pat as it "is for one's own benefit".

Pat's dyslexia presents as issues with reading and comprehension, sometimes spelling, words getting mixed up, maths, and verbalising answers, all of which become worse when under pressure as in the OSCE assessment.

Pat knows the answers but describes it as trying to open a padlock when “you know the combination but sometimes you key in the wrong code or you get the wrong information and you have to keep trying at it to try and unlock”,

hence the padlock brought to the interview as the chosen object. Pat did seek support from the Disability Services, who suggested techniques for learning, but found a “learning style” that works. Pat has to read something, write everything down and then say it out loud; repetitive learning, group learning and practising of the clinical, airway, breathing, circulation and disability (A-D) assessment and patient assessment on a teddy bear were also techniques used. Pat has also found that pretending to teach someone helps with learning and remembering information for longer. Pat teaches in front of a mirror, writes on a white board in multiple colours and on mirrors, “much to mum’s despair”, if no white board is available. This learning method has taken a long time to find but, as Pat says, “looking back I must sound like an absolute nut case but its how it works for me”.

The potential issue with the OSCE was ensuring they could “unlock” the information during the OSCE assessment. Pat knew the answers but struggled to verbalise them under pressure so preparation for the OSCE involved finding ways to remember the information required. These included using alliteration, colours, diagrams and pictures to “spark something off”. Pat found that some aspects of the OSCE, such as medicine management and the A-D assessment, were easier as these are carried out daily in the practice setting and Pat

“was even like doing it in the shower, literally anywhere” to ensure they knew it without hesitation. Pat’s experience of the assessors was a mix of “knowing they wanted you to pass...you can feel it” and being “great”, to being uncomfortable knowing the assessors and having two people watching “literally having someone watch your every move, was hell”.

Pat’s suggests there should be one assessor you know for the second part and one you do not know for the A-D assessment. Pat reported feeling fear and anxiety about forgetting information because the OSCE was “important and

meant everything”. Pat reported it was the panic and nerves that took over during the OSCE assessment and prevented them from seeing the answers - “I knew the answers were there but had a blind thing”. Pat did not pass the OSCE on the first attempt and had to retake the assessment, which increased Pat’s nerves as

“it meant everything, absolutely everything to me... I wanted to get it right so badly. Oh it pains me to talk about it....it’s so heart breaking because you know you know it and you like why don’t you do it (whisper)...”.

Pat feels that despite it taking two attempts to unlock the information, the padlock has been unlocked.

Frankie

Frankie, in the 22-25 age bracket at the time of the interview, was diagnosed with dyslexia during the first year of the undergraduate Children’s Nursing degree. Frankie was struggling with the academic component of the course and was recommended for testing by a lecturer on the course. Frankie initially ignored the diagnosis of dyslexia as they “didn’t want to know” and “didn’t want to be different”. In addition, a family member advised Frankie “not to say anything as they wouldn’t be able to be a nurse” and, consequently, Frankie was worried that if anyone found out, this might happen or the diagnosis would cause problems in the clinical placements. As Frankie progressed through the course to year three, they

“realised that actually, you know it wasn’t gonna impede my career and that there was support... and it was kind of the realisation that you can be a nurse and be dyslexic” despite comments from others that this would not be possible.

Frankie’s dyslexia presents as problems with short -term memory, recall and verbalisation of information; all of these are needed to complete the OSCE assessment. The use of colour, pictures, repetitive learning and linking theory to practice are examples of methods used to assist in learning and recalling information for the OSCE assessment. Frankie had question cards

“all covered in colour and colour coordinated little pictures, little drawings, just rubbishy little drawings. I needed to practise... literally covering a piece of paper in as much information as was in my brain because I knew that when I was talking and trying to put things across I wouldn't be able to”.

Frankie's other technique to help with remembering/recalling the required information was to look at

“it practically as well and how it did it apply to the patient and linking that rather than just reading.”

Frankie did seek advice on study techniques from support services but felt that more support earlier on would have helped “as when I first got diagnosed there was nobody to ask and nobody to talk to about [being a “dyslexic nurse”] apart from dyslexia services and they didn't have a clue cos they weren't nurses” and were “oh it might be a problem” when asked if they would experience problems within practice. Frankie believes that there is a lack of experience around dyslexia and nursing and “it's Ok to be dyslexic and nurse” needs to be promoted.

The OSCE experience for Frankie revolved around the time restrictions of the exam. The timing of the OSCE worried Frankie throughout the preparation stage and during the OSCE itself

“I was really focused on the fact that I was time restricted, so I needed to practise the timing and giving myself ten minutes.”

Even though Frankie felt confident with some aspects of the OSCE assessment such as the medicine management component and the A-D assessment, they worried about timing and how to ensure all elements were achieved and “trying to show competence in all [of them]”. Frankie discussed how preparation for the different elements of the assessment involved repetitive learning and the use of mannequins This anxiety around timing links to the object Frankie brought in: a fob watch.

Frankie found the assessors formal, but because “they were familiar faces which helps...wasn’t anyone I hadn’t met, so that’s quite good..” found this helped with the formality of the assessment.

Frankie felt nervous, panicky, intimidated, doubtful and daunted before and during the OSCE as “it’s always nerve wracking..” On reflection, after the assessment had been completed, Frankie believed it was good and reflected clinical practice but it is an exam

“..so [for a dyslexic student] bearing in mind, in terms of an OSCE, it’s all recall and it’s all communication within a time frame so it’s not ideal!..” especially as these are all areas that are affected by Frankie’s dyslexia.

Chris

Chris, in the 26-30 age bracket at the time of the interview, was diagnosed in year two of the undergraduate degree in Children’s Nursing after feedback from an assignment suggested dyslexia might be an underlying problem in year one of the course. Chris’s partner also recognised dyslexic tendencies as they were also “highly” dyslexic and used to say “..well you know, you seem to have a lot of dyslexic tendencies”.

Chris went to support services for testing, but, as this was unavailable at that time, it was not completed until the beginning of year two of the course. Chris’s dyslexia had been “flagged up” at school but Chris

“..never took it any further because I felt I was doing Ok. Um, but as soon as I came to university, the style of education was completely different ..so I thought, actually, maybe it was a good idea..”,

to be tested and get support. Chris never saw it

“as a bad thing or something to hold you back or stop you doing something.. I found it easy to accept and it helps [me] connect with children who are dyslexic..”.

Chris does feel that a late diagnosis does not give you coping strategies and

“if I’d been diagnosed at the beginning, before I started university, even in school, actually, even if I was diagnosed then, I think that perhaps I would have more confidence in myself..”.

Chris’s dyslexia causes issues with organisation and comprehension while writing things takes “ages”. Chris is “funny with colours”, doesn’t like computers but prefers doing things by hand and finds that their brain “collapses” under pressure, as in the OSCE assessment. Chris sees that those with dyslexia use “different tools” from others to learn the information and has to find “little ways of getting into something...own ways of doing things”. This links to the coconut Chris brought to the interview, saying,

“ I enjoy coconut, I really, really like coconut, um but it’s really difficult to get into... Even though getting into this coconut, for anyone is gonna be really difficult ... [those] with dyslexia, don’t have the tools, they have to go and kind of borrow the tools and, you know, find little ways of getting in there that you wouldn’t normally use...[they] just find the whole experience a bit more difficult”.

Chris did seek support from dyslexia services but found what was suggested and offered (for example computer packages, overlays) did not help. Computers were “too bright” and colour overlays “too harsh”. Chris overcame the issues with maths and formulae by finding patterns in the numbers. Using blue paper and black ink helped when writing or reading information while repetition, recording notes on a voice recorder and listening to recordings on the way to placements were also helpful; none of these was suggested by support services as learning approaches. Chris used designated revision days to go through revision notes and the whole OSCE using friends and family as the patient to practice the A-D assessment.

Chris reported seeing the OSCE

“as a song and a dance like you have to remember the words and then you’ve got to remember the moves.. if you listen to it again and again you’re gonna be able to do it again”.

According to Chris, the assessors were not “over friendly” and had “their professional faces on’, which helped Chris through the assessment.

Chris reported feeling “really, nervous when walked in, really, really nervous..... so nervous” and that the OSCE was stressful, challenging and nerve racking, Some of this anxiety was caused by having a second OSCE station in the same room as even

“on my own quite stressful, going in there” and “worried that I’d say what she said in wrong bit.. challenging - other person and maths”.

Although these were issues, Chris also commented on the positive aspects of the assessment, feeling, on reflection, that nursing includes working in stressful situations “ so a bit of stress won’t hurt us” and that the OSCE increased

“confidence in my own ability, confidence in memory – more confidence to remember a lot of information”

and so has become well equipped and enjoying the coconut.

Tyler

Tyler, 26-30 years of age at the time of the interview, was diagnosed with dyslexia during year two of the undergraduate Children’s Nursing degree, having struggled through year one of the course, especially the clinical placements. Tyler had been tested at college but it “didn’t come up with anything”.

Tyler decided to go for a test at university as

“on my first placement I struggled and it wasn’t – nothing was happening like, going in or – it just felt really difficult”.

Tyler was not affected by the diagnosis considering

“it’s quite nice to know that actually – I wasn’t thinking I was just thick or finding it difficult, there was a reason behind it...I’ve always thought that there wasn’t something quite right..”.

Tyler does believe that the late diagnosis caused “blasé” thinking and attitudes to learning aides.

Tyler’s dyslexia presents as issues with reading and oral comprehension, verbal communication, written comprehension, handwriting, having a different way of thinking, recall and memory function, processing of information, sequencing skills and maths skills. Tyler however feels that their ability to follow verbal instructions is good and

“Um I’m quite good at – I was quite good at, like, the memory thing..” but does suffer from confidence and doesn’t “trust my brain”.

Tyler did not use assistance offered by the support services as

“was set in the ways that I used to do things that I didn’t really use any of the equipment and things because I thought ‘I’m 26’, like, ‘What am I doing using all this?’”.

Tyler did use an over lay when reading but often forgot to take it to exams.

Due to Tyler’s reading problems and inability to comprehend written information, videos on the virtual learning site were the main aides for learning

“ I suppose [I am] lazy, in a way, like, I just used what was on the Moodle site because I knew my reading skills and my ability to, like, take in weren’t great, I watched the videos and made notes...but even that was difficult because they were going so bloody fast I was like pause, pause, every five minutes and then I couldn’t remember what they just said..”.

Tyler struggled with reading the pathophysiology required for one part of the OSCE [because]

“there’s so much of it – of all of them, that you don’t really know what to take and what not to take – so yeah I struggled- that was the worst bit on the OSCE”.

The A-D assessment was the easiest part for Tyler as it just required practice with the use of a doll or a teddy bear

“If you’ve got a doll in front of you, you could, like, put the blood pressure cuff on and everything. I think it makes more sense to do it that way. And even just, like, teddy bears at home ...just practised all the time”.

Consequently, Tyler brought a teddy bear to the interview “ just to be like – this is my life (laughs) for like three months of practising”.

Tyler’s main reported feeling of the OSCE was panic around not reading or remembering the scenario properly.

“I probably read it three times and I remember thinking ‘Oh god’, like... thinking ‘god I need to read this properly..” and “cos I thought ‘Oh god, I’m not gonna remember the scenario even though it’s in front of me”.

The feelings of fear, ‘is it right’, worry, stress, being nervous were also reported by Tyler who

“ just kept going over it and thinking ‘oh god, is that the right WETFLAG¹, because obviously my maths isn’t great...”.

Tyler’s overall lack of self-confidence also impacted on the OSCE experience, as

“with my own self-doubt, I was like ‘oh is that right? Is that wrong? I don’t know! I was a bit stressed, very stressed because obviously not having much confidence anyway...”.

This stress was increased by the OSCE environment because

“then you go in and you’ve got three people in there and a bloody camera and it’s just like ‘what the hell?’. You feel like you’re, I don’t know, you just feel like you’re being watched really, really a lot”.

Tyler found the assessors friendly and knowing one of them was “quite laid back anyway”, helped. Tyler, however, does report that, despite these feelings during the OSCE, when it was over there it was “like ‘why was I even worried”.

¹ Acronym for **W**eight, **E**nergy, **T**ube, **F**luid, **L**orazepam, **A**drenaline, **G**lucose calculation formula

Tyler sees the OSCE as a positive experience and one that “will definitely help me in the future”, concluding that “it’s not as bad as everyone thinks it is”.

Charlie

Charlie, in the 22-25 age bracket, was diagnosed as having dyslexia at Sixth Form College, it having been “completely missed” at primary and secondary school. During the A level exams, Charlie failed the exam-only subjects and self-referred for support at college, and on commencing university, “to double check it was still reliable”. Charlie’s reaction to the diagnosis was

“shocked. Um, and if a stigma, like people don’t, - I didn’t really know much about dyslexia at the time, I thought I can read, I can write, I don’t have much of a problem with numbers or anything. So it was that stigma of being classed as dyslexic..”.

After the initial shock Charlie researched dyslexia and

“realised a lot more people with dyslexia – nice to get into a community at school and we all got support”.

When Charlie started university, it was evident “there were a lot more people that hadn’t been diagnosed and I could explain to them that it’s not the end of the world” to have dyslexia.

Charlie’s dyslexia presents as a processing issue as

“my brain goes quicker than what actually writing, miss words out, big chunk missing as brain goes off on one”.

Charlie’s support is a microphone and computer packages. Charlie used “everything [offered] absolutely everything” using the disability allowance to “buy paper and print everything off” and a yellow overlay to assist with reading.

Charlie also utilised the support services where

“the staff, um within the nursing department and disability centre [have] all been fantastic and they’re there just to talk about things”.

Charlie used the support programmes to assist with learning the information for the OSCE. Charlie likes everything in a “set place” and the learning techniques used reflected this. Charlie “split everything into different sections”, had a plan, developed cue cards for the A-D assessment and used repetition and key words to help remember the information when preparing for the OSCE. This links to the object brought to the interview: cue cards. Charlie also learnt the A-D assessment by practising on skills days and working with another student

“I never used a doll or anything... I did enjoy doing it with a partner.. we took it in turns..”.

Charlie’s reported feelings of the OSCE experience were ones of shock, stress, feeling daunted and stated,

“ I didn’t really know what to do.. it was just instinct...I was quite shocked, it wasn’t what I expected.. it felt quite daunting”.

Charlie also found the fast pace and the whole situation stressful, especially the one to one with the assessors, explaining, “just doing it was stressful, it was just that one on one like”. The mannequin not being the simulation one used in practise sessions also caused stress as Charlie

“didn’t know it was gonna be a mannequin with no arms or legs, I thought it would be sim man – I think it did have arms cos I put the BP cuff on but it wasn’t what I expected”.

Having another OSCE station in the room was also problematic because

“I don’t like people talking.. having that other person in the room was quite distracting. I had to really concentrate and not think what other person saying”.

This became more of a problem for Charlie during the pathophysiology question as the other student

“had a different scenario and my brain was going here and there and everywhere with it. I don’t think this helped”.

Charlie’s experience of the assessors was daunting and awkward especially as they were familiar people who did not react as expected. This made Charlie

doubtful about the assessment and answers they gave and was embarrassed by having to ask again for information because of assessor's lack of reaction.

Despite the problems faced during the OSCE, “ at the end [Charlie] felt relieved, proud and happy”. Charlie sees it as a stressful experience but now

“I’m gonna be a nurse after, you know it was quite a happy feeling – the sense that ‘oh I’ve got this far, if I couldn’t do it I wouldn’t be here now! So that was quite nice.. I can’t wait I’m so excited..[about becoming a nurse]”.

Paris

Paris was 22-25 when interviewed and was initially diagnosed at school after some unexpectedly poor A level grades. The diagnosis came as a “surprise” and

“it made me feel quite different to other participants, I felt it was a bit of a label on me and that I was concerned at the time that I would be treated differently by teachers and by, um , peers and things like that, as a result”.

Paris initially saw the diagnosis as a negative thing on top of the negative feeling of receiving poor A level results, but, with hindsight, Paris’ views have changed.

Paris’s dyslexia presents as issues with written and oral comprehension, reading, slower processing time, sequencing, recall and memory. Paris has an individualised plan to assist them. This is mainly extra time in exams and two weeks extra on assignments. The support team recommended an over lay but Paris did not find this useful.

Paris believes their science background and interest in anatomy and physiology put them in a “good position” for the OSCE. The learning was not difficult but the verbalisation of the information proved to be an issue especially due to the problem of moving components round

“trying to break the habit of mixing components up – kept doing it and especially when under pressure”.

Paris’s learning consisted of “repetitive rehearsal” of the OSCE

“We had a teddy bear there and we even had a little polystyrene cup with a tube coming out of it to be the oxygen mask that we were putting on and um, trying to catch each other out, putting different types of masks there and I think one of the things I found really useful was verbalising it to somebody else..”.

Paris found writing everything down and drawing assisted with learning and also with recall in the OSCE.

Paris’s reported feelings of the OSCE were apprehension, pressure, feeling foolish, forgetful, rushed, failure and of making mistakes. Paris feels it was about

“managing myself, it was about a bit of emotional intelligence, I suppose you’d call it and kind of keeping yourself calm..”

Paris also found having someone else in the room difficult. Paris’s experience of the assessors was mixed. Paris initially felt unsure as

“you never know what to expect because we were told that the lecturers were gonna be totally deadpan, deadpan faced..”.

Paris also saw one assessor being more interactive and the other

“who was obviously my marker who was very sort of at a distance, corner of my eye”.

The concept of being listened to was an “alien concept” and Paris found having people listening closely to you “uncomfortable”.

After the OSCE, Paris experienced

“really mixed feelings about it. My immediate reaction... was that I had failed completely, that I had made, um, very – such severe mistakes.. but looking back on it now I can say that was really, um, it’s probably a foolish reflection, but I feel it, I look at it now and say that was a silly reaction to have because I passed the OSCE well”.

Paris further commented that there is disconnect between learning about something and then doing it in practice which links to the object Paris brought to the interview: a poem

“When I Heard the Learn’d Astronomer’ which [is] simply about a chap who’s – he’s sitting in lectures and listening to a famous astronomer talking about the stars etc.... And he starts to feel tired and sick and bored, so he wonders out of the lecture and the looks up at the night sky and sees the beauty..”

For Paris, the poem

“really sums up that kind of, um, the difference between doing something in a simulation or even learning about something- learning about doing an OSCE in a lecture and the actually doing it are such very different things..”.

Despite these feeling, Paris considers that the OSCE “strengthened my skills” and “I almost think it’s something we should do every year”, as the feedback helps to identify areas to improve on.

4.3: Thematic analysis.

Following the profiling, the data was then considered within the identified themes formed during the data analysis process. The questionnaire and interview data were amalgamated during the analysis phase and the following three themes were ascertained:

- Theme One: The impact and the response to the impact of dyslexia.
- Theme Two: The assessment process.
- Theme Three: Recommendations for the future.

4.3.1: Theme One: The impact and the response to the impact of dyslexia

This theme was the first to be identified during the analysis stage with three subthemes identified within it: Impact and recognition of diagnosis, views and effects of dyslexia, support. The impact of dyslexia was an important topic for all participants interviewed and they all wanted to talk about their dyslexia and describe how it affects them.

4.3.1.1: Impact and recognition of diagnosis

The impact and response to the impact of dyslexia transpired as a subtheme during the interviews. The age at which participants were diagnosed was captured within the questionnaire data and showed that 8 of the 12 were diagnosed between the age of 16 and 20 years, corresponding to the end of school exams and the beginning of their degree course. Although the questionnaire data identified that the majority of participants were diagnosed in the first year of their course, when this was discussed at the interview stage, it became apparent that some had been diagnosed with dyslexia prior to starting university.

Tyler, Charlie and Paris all commented that there were issues identified after sitting their GCSEs or during their A level exam years. Charlie and Paris were both identified during their A level exam years where they saw a change in grades or did not pass the written components with Charlie stating “so when I did my A levels I got B in sport and then the other subjects I got Us in and the way I revised is exactly the same in everything, it really confused me so I actually went for some support... it came back dyslexic” (Charlie).

Paris had a similar experience to Charlie revealing that

“the grades I got in [exams] didn’t match up with the amount of effort and work I’d put in...kind of the knowledge I presented in classroom”.

Chris was “flagged up” at school but did not act upon this as felt they were doing “Ok” whereas Tyler “had a test at college and that didn’t show anything” and “always struggled”. Pat talked about “it” being underlying at school but

“I never really want to have it..cos there was, like, a whole stigma against, like, attached with it... and didn’t want to have extra time or be separated from friend” (Pat).

Pat further discussed that even on starting university

“I didn’t wanna have it but if there was any help that I could get that was gonna help me I wanted to take it” (Pat).

Pat, Chris, Tyler and Charlie all sought support and testing within year one of university because the style of education had changed and they were struggling, or the support and help was highlighted to them. Chris found

“the style of education was completely different and I’ve been out of education for a little while so I thought actually, maybe it was a good idea just so there was some more support in place” (Chris).

Chris struggled with the writing component of the course and agreed to testing but said

“I had to wait until my second year to have it done.. I don’t know how I got through year one as support was not in place until midway through year two”.

“On [the] first placement, [Tyler] struggled and it wasn’t- nothing was like, going in”.

The placement highlighted difficulties and Tyler also struggled with the academic work in university. Charlie, however, sought support to

“double check that everything was you know, if it was – not true, but if it was still reliable and that and then they said yes” (Charlie).

Frankie also had struggled with the academic writing component of the course and, during year one, was recommended for testing by a tutor, but was reluctant to be tested as they were worried about being labelled as having dyslexia. This issue of having dyslexia and nursing concerned Frankie all the way through the course but it was not an issue identified by the other participants.

4.3.1.2: Views and effects of dyslexia

Views and effects of dyslexia developed as a sub-theme throughout the data analysis stage. The interviewees talked about their views of dyslexia and how it affects them. Pat and Charlie both felt there was a “stigma” to having a diagnosis of dyslexia and, although the word “stigma” was not used, Paris felt that it had caused a feeling of negativity and difference stating

“I felt- it made me feel quite different to other participants, I felt that it was a bit of a label on me and that I was concerned at the time that I would be treated differently...saw diagnosis as another negative” (Paris).

Paris also described feeling less of an individual at university as

“grouped together with everyone who’s dyslexic is my experience- not an individual” (Paris).

Frankie mentioned being “unsure” and, as previously discussed in their profile, worried about the diagnosis and the impact this may have on being a nurse.

This anxiety was further heightened by a relative who was a nurse who

“told me not to tell anybody because I wouldn’t be able to be a nurse if they knew” (Frankie).

Chris and Tyler, however, see the diagnosis of dyslexia as an answer to a “lack of confidence” and a reason behind them struggling.

“I’ve never seen it as a bad thing, I’ve never seen it as something that can hold me back or mean I can’t do anything” (Chris).

with Tyler stating

“it was nice to have that clarification that actually, yeah, you do struggle and it’s for a reason.. I’ve always had bad confidence.. it was nice to know what was going on” (Tyler).

Chris, in fact, sees dyslexia as the person with dyslexia needing different tools from other people and having to borrow different tools to access the information. Chris linked this idea to the object (a coconut) brought to the

interview where everyone needs tools to get into the coconut but the tools needed by Chris are different from those without dyslexia.

The questionnaire asked the participants to identify how dyslexia affects them and this was further clarified within the interview. Table 4 shows the questionnaire results on the effect of dyslexia on the person. The results show that the majority have issues in organisation, reading and written comprehension, processing, recalling and memorising information and sequencing, all elements essential to pass the OSCE assessment.

Table 4: Effects of dyslexia

Effect of dyslexia	Number of participants ranking this 1-3 (1 not at all – 10 all the time)	Number of participants ranking this 4-7 (1 not at all – 10 all the time)	Number of participants ranking this 8-10 (1 not at all – 10 all the time)
Organisation of ideas	4	4	4
Organisation of information	4	4	4
Reading comprehension	3	1	8
Oral comprehension	4	4	4
Written comprehension	2	2	7
Hand writing difficulties	6	4	2
Verbal communication	6	3	4
Have a different way of thinking	4	3	5
Recall and memory of information	3	1	8
Processing of information	1	3	8
Sequencing skills	3	3	6
Maths skills	5	1	6

These effects were further identified and elaborated upon during the interview stage where participants discussed the problems they encounter with their dyslexia. Pat, Charlie and Paris discussed issues with processing of information. They all talked about the time it takes to deal with the material they are reading and to understand it

“It takes me a long time to either read something and actually understand it. Um, so that’s the biggest thing for me is actually reading a piece of

literature and actually breaking it down to try and understand it. It takes me a heck of a lot of time to do that” (Pat).

Hence the Pat’s object of the coded padlock. For Charlie

“it’s the processing side of dyslexia, so I can read and I can write, um, it’s if you give me a question it sometimes takes me a bit of a while to do that” (Charlie).

Paris explains the problem of reading and comprehension as

“if me and someone who was not dyslexic were to read a hundred pages of a book, um we would- I would take longer than the person, the other person to read and digest that information and feel confident to repeat and to answer questions on that information” (Paris).

Paris also has problems in verbalising what they are thinking and explains how sometimes what is said out loud is different from what they are thinking, especially with numbers and mnemonics, which concerns Paris during exams such as the OSCE when you have to verbalise the information to examiners.

Frankie was unsure of the exact issues stemming from their dyslexia, but talks about “the brain losing information” and how in stressful situations “the brain collapses” and is aware that short term memory is a big issue particularly when having to recall information in stressful situations. Frankie also found that, even though they knew the answer, verbalising it or writing it down was an issue.

Chris talks about how the “brain goes off in directions” and is “unorganised at times”. Chris also identified issues around reading, writing and comprehension, as

“..it takes me ages to write things and in exams, it takes me *ages* because I have to keep going over it to make sure that I am sure it is right” (Chris).

Chris finds black writing on white paper “flashes at me” and finds that there is a need for “different tools” from others and at times the problem is “not having the

tools to get into something” as a person with dyslexia which relates to the opening of the coconut; you have to “borrow tools and find little ways” of getting in. Colour and too much information cause issues, but Chris has found that blue paper and black ink helps when reading or writing, and finding patterns in maths reduces the “intimidation” of maths.

Tyler talks of their dyslexia as “being a different sort of dyslexia” and identifies problems with not being able to read or write on white paper

“I can’t really write or read on white paper and things like that, and um numbers get jumbled up and I can’t read – I can read but I wouldn’t be able to tell you what that just said, it’s really – I have to read it about four or five times and things to be able to get what it says” (Tyler).

Tyler also states that they “don’t trust my brain” when using numbers on a calculator as there is no guarantee that the right numbers have been programmed in. Tyler does state that they are good at memorising printed material and following verbal instructions.

4.3.1.3: Support

One question in the questionnaire focussed on support and assistance, which was discussed further during the interview stage. Ten respondents indicated they received support with their dyslexia, while two stated they had none. The questionnaire also asked what type of support was received and from whom.

Table 5: Types of support collated from questionnaire data

Type of support	Number of respondents receiving the support
Spelling, reading and writing support	1
Extra time in exams and essays	6
Computer soft ware	4
Computer and computer hardware	3
Essay support from student services	1
Learning support Tutor	3
Financial allowance	1
Computer in exams	1

The answers were free form and only nine respondents answered them, some of whom identified multiple support types. Table 5 and Table 6 present the collated responses and show that extra time was the main support type for six respondents, with technology also featuring as a high support type.

The types of support were further clarified during the interview stage. All the participants who answered the questionnaire and were also interviewed identified receiving extra time for essays and exams during the interview. This was not surprising as it is university policy to give students with dyslexia 25% extra time for all assignments. Eleven participants used this extra time (ten minutes rather than five) at the start of the OSCE for reading and preparation. One participant, with problems verbalising the required information, used it during the OSCE as they felt this would enable them to go more slowly, allowing them 30 rather than 25 minutes to perform all aspect of the assessment.

Table 6: Assistance students received collated from questionnaire data

Assistance from	Number of participants receiving this method of support
Disability Support team at University	5
Individual Tutor	1
NHS	1
External agency	1
Computer aids	1

Pictures, colour and visual aids were useful methods of support identified by Pat, Frankie and Tyler during their interviews and were techniques either recommended by the Disability Support Service or were methods they discovered themselves.

Pat talked about how some guidance was given by disability services through testing ways of learning stating

“you had this sheet to fill in and it’s like you’re either a visual learner, a, um I can’t remember the other names.. so I filled out one of those forms and I was a visual learner and they kind of taught me what I could do...like any sort of colour helps , highlighters, gel pens and um pictures

as well. They taught me about pictures, if I would do little diagrams, that helped” (Pat).

Frankie discovered that colour and pictures helped in remembering information stating

“so it was all kind of colour coordinated, little pictures, you know, um kind of little drawings, just rubbishy drawings- it’s easier to remember pictures and colours than it is words” (Frankie).

Tyler also found that pictures and colour are important for memorising information and commented

“..it was more visual for me to just look at and it’s really weird, I can memorise things on paper because of what they look like and where they are, not really because of what they say..” (Tyler).

The use of computer software packages or other technology was not seen as a major support. Only two interview participants, Chris and Charlie, discussed using technology to assist them. Chris used home recordings of notes and replayed these on the commute to placement or university whereas Charlie had multiple packages to assist in organising notes and ideas and also recorded lectures and own notes as “trying to listen, understand and write notes is difficult”. Paris describes support as extra time and an individualised plan for assessments.

Assistance was further discussed in regards to what they were offered to help them. All interviewees mentioned Disability Services as helping to identify methods to aid learning, but, interestingly, Chris and Tyler did not find the support suggested helped them. Chris talked about trying what was suggested

“I’ve tried other people’s ways of doing it and even just- I will try them, but most of the time I know that they’re just not gonna work for me, that I need to try something, see how I get on with it and then reflect on that... I need to find my own way rather than other people telling me what might help” (Chris).

Tyler also talked about how if they had found out about their dyslexia at a younger age they might have used equipment

“I think it’s each to their own, like, if people have known they’ve had dyslexia for a while then they would have different ways of working...whereas me, I only found out 2014 -15, so I was set in the [my] ways” (Tyler).

Paris, however, asked for help to finance printing of lecturer notes and other materials, but found the allowance was for specific equipment that was not useful, commenting

“um one of the things that I was keen to ask for when I went to the dyslexia service team, which I wasn’t – which never was resolved was that I was keen to be helped to print off everything because we’re charged..” (Paris).

Paris also found the process required for claiming the allowance put them off as it was

“another form I had to fill in and complete and send off and it was stressful enough coming to university and enrolling without having to fill out another form” (Paris).

As mentioned earlier all participants did use the extra time offered for examinations and assignment writing.

4.3.2: Theme Two – The assessment process

The assessment process was identified as the second major theme during the data analysis with 3 sub-themes emerging within it. These themes are presented in the order of the actual assessment process in order to take readers through the experience of the OSCE.

4.3.2.1: Learning for the assessment with dyslexia

Learning the components of the OSCE (pathophysiology, physical assessment and medicine management) plays a big part in the OSCE experience. When asked in the questionnaire, 10 out of the 12 participants felt they were well

prepared for the OSCE, but all twelve *slightly agreed to strongly agreed* that the preparation took a lot of time. The virtual learning site for the OSCE assessment contains a wide variety of information and learning aids, such as videos or the OSCE crib sheet, which were identified as helpful by 11 out of 12 questionnaire respondents and used by all interviewees. They all stated information found on the virtual learning site offered positive support for their learning, with Tyler describing themselves as “bit lazy”, relying on the virtual learning sites for the required information rather than reading. Chris, however, found there was too much information

“there’s a lot of guidance on Moodle, so you could go to the guidelines and things like that, um, but it that was really difficult because a lot of that is interpretation.. need things said in plain English” (Chris).

Repetitive learning, from writing and rewriting notes to continuous practising of the assessment itself, featured across the free form questionnaire answers (questions 11 and 12) and during the interviews. Pat, Frankie, Charlie and Paris all discussed how they wrote everything down and rewrote their notes learning the information from doing this regularly, Paris saying that when they were bored in a lecture, they would write out the assessment on a piece of paper. Pat and Paris used this method as the beginning of their learning process and then progressed to teaching the information

“Ok, so it sounds really stupid, I know, but it’s the way it works for me, um I have to pretend that I’m teaching someone so I literally have a white board at home and I have all the different coloured variety of whiteboard pens you can get and I have to sit there and pretend like I’m teaching a class. I have to go over and over and over and over it and over it until I understand” (Pat).

Paris used pictures and explanation to remember information

“I’d want to be able to draw a normal, um, bronchial and then draw an asthmatic one. And how they’re different and be able to. As I’m doing that, explain like I’m talking and explaining it to someone” (Paris).

Pat had to retake the OSCE and discussed how the teaching became the most important part of learning for the second attempt, often talking to the mirror

“I teached it a lot more.. just in the mirror, oh god, it sounds bad doesn’t it?..just in the mirror, even just standing in the mirror talking to it – or teaching my parents or somebody not from like the nursing or medical background...” (Pat).

The responses to question 12 of the questionnaire illustrate that all participants gathered the information together and made bullet points, used pictures or drawings, colour and keywords; some had posters with information on them which was also seen in the interview responses. Charlie’s object was cue cards and these featured as a major part of the learning process alongside “sticky notes on mirrors and in the kitchen” and mind maps on each body system. Pat and Chris used rhyming, alliteration and songs to help them through the learning process.

Working with others also became an important method of learning. All interviewees talked about practising in groups or with others as a distinct way of working through the practical side of the OSCE. Four of the six interview participants attended skills sessions arranged by the university to practise the assessment, with two of them using partners or friends to run through the assessment. Prior to the OSCE, they were in clinical placements and all but Chris talk about using their time in practice to assist them with the A-D assessment and how they constantly followed the systematic process of the assessment when caring for their patients

“I was fortunate that I was in A&E and my mentor use to make me do it [A-D assessment] all the time for every patient that came in..” (Pat).

“looking at it kind of practically, as well, like how did it apply to the patient and linking that...and when I was doing shifts I kind of tried to kind of – oh let’s do this the way that we do it in the OSCE..” (Frankie).

Tyler stated it was “normal practice” and Charlie found that “just going through it at placement was the best” as it could be related to the patient directly; a point

that Paris also made. All mentioned practising at home using teddy bears, dolls and other homemade props to assist in remembering the different parts of the assessment. Tyler commented that the use of

“teddy bears at home and stuff, just practised all the time..this is my life for like three months” (Tyler).

Pat used a teddy bear and the cat, whilst Chris and Charlie used friends and relatives as pretend patients as Chris states “[I] couldn’t use a teddy as silly as don’t look like human”.

Paris discussed how the group they learnt with made up scenarios and different props to “catch each other out” and how they could not stop laughing during their practice sessions. The preparation appears to have been carried out vigorously and in-depth, with fun and role-playing becoming a large part of the learning process for all as well as the imagination in creating pertinent scenarios.

Timing featured as a large part of the learning process; ensuring they were able to cover all aspects of the OSCE from the preparation at the start of the OSCE through to the practical was essential. When asked in the questionnaire if there was sufficient time to complete the OSCE, only one participant *disagreed*, the other 11 either *agreed* or *strongly agreed* there was enough time. The issue around timing was a huge part of the process for Frankie, who worried about timing, indicated by the fob watch brought to the interview, and Paris, who was anxious about not having enough time to finish due to problems with processing and recall. Both Frankie and Paris mentioned practising timing throughout their preparation and learning.

4.3.2.2: The assessors

The role and behaviour of the assessors featured as another sub-theme within the data. All interviewees discussed the impact of the assessors on their OSCE experience. The number of assessors was an issue for eleven of the participants, all of them finding having 2 people watching you was “hard,

uncomfortable and daunting". Pat and Tyler express similar feelings with the latter saying

"you go in and you've got three people in there and a bloody camera and it's just like 'what the hell'?" (Tyler).

Tyler further commented, "you just feel like you're being watched really, really a lot", a comment also made by Pat and Charlie. Charlie found having two people watch them do the maths question was the hardest part whilst Paris commented on having people listening to you as an "alien concept" and compared it to the uncomfortable feeling you get when doing a driving test and felt they were at "the mercy of the examiner".

Four respondents, Chris, Tyler, Charlie and Paris, all discussed how one assessor interacted with them, but it was the second assessor writing that worried them and made them feel like they were "being tested even more" (Tyler). Tyler found this particularly intimidating and 'scary',

"they were looking across at me and writing down everything you were saying and I was like 'what did I say?'..you can't even see what they've written down and you're kind of like 'what are you writing?' but you can't say it" (Tyler).

Paris described it as "a bad cop, good cop situation" and uncomfortable rather than intimidating.

The behaviour of the assessors during the assessment process became a discussion point for all. There appeared to be an expectation that the assessors would be "deadpan faced" (Paris) but Pat, Tyler and Paris all found the assessors friendly and as Paris comments

"I was welcomed with a big smile and 'Hello' and everything, and things like that and for me I felt relieved that it wasn't quite as, um, almost robotic from them as we'd been kind of warned" (Paris).

Chris, Frankie and Charlie, however, found the assessors unfriendly and formal and as Chris discusses they had their “professional faces on” but does acknowledge that one assessor

“stood up and put his hand out to me and I shook his hand...I don’t know why (laughs)” (Chris)

which helped with the nerves. Charlie commented further around the assessor’s behaviour and facial expressions stating

“um, she had a face on, like normally when she’s here she’s really nice and smiley and you can tell how she’s feeling, but – when it was that she had this, like poker face on..there was just nothing I could tell out of her face..” (Charlie).

Although these comments were made, it was acknowledged by Chris and Frankie that this is what was expected from the assessors, as it is an exam and as Chris comments

“if they’d been overly friendly I would have maybe relaxed a little bit too much and I think it’s better to be a bit stressed” (Chris).

It appears from the data that knowing the assessors played a large part in OSCE process for the participants, with one participant commenting that familiar faces were helpful and “quite good” (Frankie), whereas others found the familiarity “bothered” them (Pat, Tyler) and knowing the assessor made Charlie feel “daunted and awkward”. Tyler felt that having an assessor who had not taught them was easier than someone who had been involved in teaching commenting

“maybe someone who had more to do with the actual OSCE teaching and stuff like that, I would have found it a bit harder, but I had someone that didn’t really have a lot to do with it so I felt like ‘oh he’s just another person..he doesn’t really care what I say’ rather than if someone like (name) then I’d be like ‘Oh god! I really need to remember everything’ because she’s been teaching me the whole time” (Tyler).

Pat initially felt knowing the examiner made it harder and pondered on the concept of having an external marker making it easier during the A-D assessment, but decided the friendly face was nice, acknowledging that knowing the assessor was a good thing as you could feel them

“willing you to pass..wanting you to pass so badly and that’s a good thing.. whereas an external wouldn’t know you or feel them same about you passing” (Pat).

4.3.2.3: Feelings and experiences

The sub-theme on assessors showed some of the effects of the OSCE on participants and, on examining the data further, the effect of the OSCE assessment was an important topic for them. Feelings around the OSCE assessment were seen within the data (Table 7). The questionnaire (question 13-13.9) asked specific questions about feelings, whereas the interview did not ask about this directly, although participants referred to their feelings during their discussion.

Feeling nervous during the OSCE was identified as an issue in 11 questionnaire answers and was further discussed by Pat, Chris, Frankie and Tyler during the interview stage. Stress also featured as major feeling in the questionnaire responses with 11 *slightly agreeing* to *strongly agreeing* the OSCE was a stressful experience; a feeling that Chris, Tyler and Charlie clearly identified during their interviews.

The interviewees initially revealed feelings such as panic, anxiety, pressure, fear and shock, also expressing they felt daunted, intimidated, doubtful, embarrassed during the assessment process. Pat identified it as “heart breaking and painful” on reflection during the interview with Charlie finding the process “awkward”.

Despite the less positive feelings experienced being dominant in the discussions, on further examination, more positive reactions were evident in both data sets. Charlie found the OSCE realistic while Pat and Paris believed it to be important. This importance is also seen in the questionnaire responses

where 11 out of 12 agreed it was a meaningful assessment and 7 out of 12 agreed it was a fair assessment.

Table 7: Key feelings and experiences of the OSCE assessment collated from the questionnaire and interview data

Key Feelings Expressed	Number of participants from Questionnaire	Number of participants from Interview
Important	-	1
Gained confidence	9	2
Improved memory	-	1
Realistic	-	1
Enjoyed it	-	1
Proud	-	1
A fair assessment	7	-
Liked it/good	9	1
Nervous	11	4
Panic	-	4
Pressure	-	4
Pain	-	1
Heart breaking	-	1
Stressful	11	3
Worried	-	4
Challenging	-	1
Horrible	-	2
Intimidating	-	2
Daunting	-	2
Doubt	-	3
Fearful	-	1
Shocked	-	1
Awkward	-	1
Embarrassed	-	2
Failure	-	1
Struggled with maths	-	3

Charlie discussed how they enjoyed the OSCE, with 9 out of 12 questionnaire respondents liking the OSCE. Chris and Pat stated in their interviews that they gained confidence from doing the assessment, which is also seen in the questionnaire responses where 9 out of 12 people agreed they had gained confidence from doing the OSCE. Chris commented

“Yeah I think I’ve got more confidence in myself to, um, be able to remember quite a lot of information.” (Chris).

Charlie reflected on feeling proud but relieved that the OSCE assessment had been completed successfully.

The OSCE assessment was reported as a positive experience by the majority in both questionnaires and interviews. In the questionnaire, 10 out of 12 respondents understood the OSCE assessment, and 11 out of 12 agreed that it provided them with an opportunity to demonstrate their knowledge and to learn. 8 out of 12 respondents also agreed that the OSCE reflected the teaching received.

All 12 questionnaire respondents agreed that the OSCE was relevant to practice, but, during the interviews, both Frankie and Paris discussed how the OSCE is removed from reality and Paris said

“we go to lecturers and things but then they’re not like the real thing and there’s a disconnect between the two” (Paris).

Frankie acknowledged that the OSCE reflected clinical practice and skills required in practice, a point that 10 out 12 questionnaire respondents also *agree* and *strongly agree* with. Charlie also referred to the link between practice and the OSCE in their interview and commented on how it highlighted the good parts of their knowledge and also those that need working on. Chris felt that they are now well equipped for practice and Paris commented that the OSCE strengthened practice skills and showed areas for improvement.

The question about the OSCE taking place in an appropriate environment saw 7 out of 12 respondents disagreeing about its suitability. The environment was also raised within the interview by 4 of the participants. Chris, Tyler, Charlie and Frankie all commented on the presence of another candidate in the room and how distracting this was as they could hear what the other person was saying. Chris was worried that they would say what the other person was saying, with Tyler finding that their mind drifted to what the other person was saying and Paris felt they lost focus. Another person being in the room was particularly

difficult for Charlie as the processing of information is a large part of their dyslexia and consequently,

“I don’t like people talking..having that other person in the room it was quite distracting, I had to really like concentrate and not think what the other person was saying.. my brain was going here, there and everywhere with it” (Charlie).

4.3.3: Theme Three: Recommendations for the future

The final theme that appeared from the data was linked to recommendations for the OSCE assessment in the future. This theme was addressed within the questionnaire and interviews with direct questions asked around changes to the OSCE. On analysing the data, four subthemes emerged: extra learning support, support services, preparation and changes to the exam and exam room.

4.3.3.1: Extra learning support

Extra learning support was a topic that five out six interview participants discussed as something they felt could be changed. All participants acknowledged that there were a lot of resources available but alternatives could be offered to assist further in preparing for the OSCE. Pat, Frankie, Tyler, Charlie and Paris all identified that more tutorials would have been beneficial and should include group discussions and A-D assessment practice. Pat suggested an hour each day to practise the OSCE perhaps in the lunch hour would be helpful. This was also discussed by Frankie who suggested revision sessions the week before as “practice is important”. Tyler discussed how

“we only had one OSCE prep session, could have done more than that and – like, it’s only when you take it upon yourself to do it out of uni that – then you practise, otherwise we only had one session and I think that doesn’t help.” (Tyler).

Pat, Tyler and Paris all identified the need for different resources, Pat suggesting that videos of a past student doing the OSCE and A-D assessment would be useful since the videos available were not nursing specific so

“ that you could actually see it, cos I know when I did it, on the first time, I did YouTube videos to watch how people did it, but I couldn’t necessarily

find sort of, like, nursing one, there's a lot of like, med student OSCE tutorials" (Pat).

Tyler suggested that there should be more varied resources not just videos as "it needs to be a bit more varied, like diagrams, text book articles, videos so people can find out what they like to do and then use it that way rather than just putting a video up and making people make notes" (Tyler).

Tyler and Paris also stated they would like more assistance with the maths and pathophysiology sections of the assessment, both feeling these areas were not addressed so much in the preparation for the OSCE. Eleven questionnaire participants *agreed* to *strongly agreed* that the OSCE guidelines helped, with one disagreeing. This is a point discussed earlier in 'learning for assessment with dyslexia' where participants had identified these guidelines as a useful learning tool for the assessment.

4.3.3.2: Support services

Support services for students with dyslexia were mentioned by half of the interview participants as not being useful during this assessment process. Frankie found, throughout the OSCE assessment, that there was no-one to talk to in Dyslexia Services and they were not helpful with supporting them through the OSCE assessment as they are not nurses and do not understand the assessment.

Tyler also found that no one had ensured different coloured paper was used for those students who required it. Tyler discusses how the lecturer emailed to ask about extra time, but there was no mention of other adjustments/requirements students might need to be asked about.

" well I know that (name) emailed everyone and said 'if you need extra time, let me know', may she could have said and 'if you need-' cos obviously when you get diagnosed with dyslexia you get all these, like, recommendations, they should have a note of them and you should be able to tell them – actually I need pink paper.." (Tyler).

Paris thought

“that what would be good for students with dyslexia is to be able to go through an OSCE with someone observing them – so if they are getting flustered or distressed by it at a point in the OSCE to have someone observing that and then be able to help them with a strategy to deal with that or something, to identify those points where, um, they’re finding something more difficult.”

Pat, Chris and Charlie did not mention support services’ role or assistance during their interviews.

4.3.3.3: Preparation of students

The preparation of students was considered within the sub-theme ‘extra learning support’, but, during analysis of the interviews, participants voiced ideas and suggestions to assist students preparing for the OSCE assessment. Frankie, Chris and Paris all identified the individualism of learning as an important part of the preparation commenting

“I think you’ve just got to use what methods you’ve learned and what works for you. So everyone’s individual..” (Frankie).

“don’t bombard yourself with too much information. And stop looking at Facebook at what everyone else has done, um because a lot of the time with dyslexia you’re comparing yourself to people who *don’t* have dyslexia, and what works for them, how they grasp information, is most probably not going to work for you, you know, you’ve got to find your own way of getting that information and retaining that information” (Chris).

“it’s very individual” (Paris).

Tyler identified that

“you can bring in coloured paper, overlays and discusses that it is acceptable to ask a question if you are unsure or to ask if you need clarification or information to be repeated during the assessment.”

Pat's comment on preparation was "I think the most important thing is to tell students not to be fearful of it".

4.3.3.4: Changes to the exam and exam room

Changes to the exam and exam room were two areas that became discussion points during the interview process, with all interviewees suggesting different changes. The topic of change had also been addressed in the questionnaire (questions 15.3 and 16, as free form answers). Nine out of 12 respondents to the questionnaire *slightly* to *strongly disagreed* that the OSCE needs to be changed, with three respondents only *slightly agreeing* it needs changing.

The first change that was identified concerned extra time with two questionnaire respondents stating they would like extra time (more than is currently given) and one respondent just mentioning extra time without elaborating on where and when this would be needed. Extra time was also identified during the interview by Frankie, who would have liked fifteen minutes for preparation rather than the ten minutes currently given.

Chris considered the length and depth of the OSCE assessment to be too much for the allocated time. This was also a comment made by a questionnaire respondent who stated

"I ran out of time so wasn't able to say everything I had learnt in the A&P (anatomy and physiology) section. However I am not sure if this was down to my dyslexia or general time management" (Respondent 3).

Chris felt that the A-D assessment and rationale were good but believes the pathophysiology required too much depth and that, since medicine management is demonstrated in other assessments, those questions should be removed.

Tyler stated no changes in the questionnaire, but, during the interview process, talks about the issue calculators not being allowed in the OSCE when they are in other modules with maths assessments. This was difficult for Tyler as they had to relearn doing maths calculations manually saying

“to take them away (calculators) and then go back to how you used to do it, which obviously we had so much practice in anyway, was just difficult” (Tyler).

Tyler also suggested the scenario should only include relevant information and all background information about the family should be removed to make it easier to read and process. Tyler also mentioned writing the pathophysiology rather than saying it, a change that would assist some people with dyslexia. Paris suggested, in both the questionnaire and interview response, that more preparation space and more paper were required, with one respondent to the questionnaire suggesting “more 1:1 sessions and access to labs” (Respondent 4).

The exam environment was a major discussion point for all respondents. The problem of other students being in the room/sharing of rooms was discussed by 4 of the interviewees and one questionnaire respondent who

“found it difficult to concentrate as another student was doing their OSCE at the same time as me within the same room” (Respondent 2).

Pat mentioned this in the questionnaire but not the interview and Chris, Tyler and Paris all commented on others being in the room being a distraction, with Chris and Tyler both suggesting that the exam rooms should be single use. Charlie recommended pulling the curtains across the room to hide the other person. Paris described the difficulty of having another person in the room but does further reflect on this as being part of practice so although it was

“ something I struggle with, and I’m hesitant to alter it form the OSCE because I think the OSCE should reflect real practice, um is there distractions in the room, so we had to split with another student on the other side of the room, and that for me, it was at times, difficult to focus because somebody else is speaking behind you..” (Paris).

The first stage of the OSCE, the five-minute preparation time, was discussed by Pat, Charlie and Paris. Pat suggested that the first 5 minutes should be outside the room rather than at a table in the room, as this would help to reduce nerves

and allow a clear mind. Paris had difficulties with the preparation aspect of the OSCE as they wanted the extra time during the A-D assessment and had to wait the extra five minutes other students were using on the preparation stage. Paris recommended that single rooms would prevent the wait for those using the time in the assessment. Charlie found the room “muddy” and due to the effects of the dyslexia mentions how having set places and using the original table for the maths question would have made it less stressful.

The use of simulation was suggested by Tyler and Paris as a way of making the A-D assessment more realistic and reflecting real life both remarking

“it was odd we didn’t have alarms going off as in real life have alarms going off” (Paris).

“I think it needs to be more real life to actually visualise what you’re doing..have the actual Simman connected so you can feel a pulse. I remember searching for a pulse and cos you can’t feel it you don’t know if you’re doing it right” (Tyler).

Paris also suggested using parents to act in the OSCE would make it feel more real.

Pat, Tyler and Paris further suggested that the OSCE should not be a one off in the final year but, in fact, should be done over the whole course. This was also agreed by 11 out of 12 respondents in the questionnaire, who felt the OSCE could be used to evaluate other skills throughout the course. Although recommendations for the OSCE assessment were made, when asked about the OSCE’s relevance to practice, all 12 respondents *agreed to strongly agreed* the OSCE was relevant to their practice and should be kept as an assessment method.

This chapter has presented the perceptions and experiences of students with dyslexia who undertook the OSCE assessment. The data from the questionnaire and object elicitation semi- structured interviews has been considered and reported in two ways:

1. The journey of interview participants has been illustrated by portraying their individual stories of the OSCE assessment.
2. The themes deriving from the questionnaire data and the interview data have been presented to the reader.

The findings show that each participant had an individual journey with the OSCE assessment but there were similar themes occurring for all participants. A new topic, which became evident from the data, was the participants' perceptions and experiences of dyslexia. This was not an original aim of the study but it became an important part of the participants' stories and one to follow through.

Chapter Five: Discussion, Recommendations and Concluding Remarks

5.1: Introduction

This chapter will critically engage with and discuss the study findings in relation to the literature. The chapter will consider the study's contribution to knowledge in the fields of dyslexia, nursing and the Objective Structured Clinical Examination (OSCE) assessment, the strengths and weaknesses of the study and present recommendations for policy and practice.

This mixed methods study aimed to explore the perceptions and experiences of the OSCE from the perspective of nursing students with dyslexia and, subsequently, consider ways the OSCE can be developed as an assessment method for such students. The study draws data from a questionnaire and face-to-face object elicitation interviews. The literature review chapter considered areas around disability and inclusion, higher education, assessment and the OSCE in relation to dyslexia, and identified the complex nature of disability and that defining something such as dyslexia is also multifaceted. The literature reviewed around students with dyslexia and the OSCE assessment highlighted the dearth of studies and, therefore, demonstrated the need for further research into dyslexia and the OSCE assessment. The study's findings identified three distinct areas warranting further discussion: the OSCE as an inclusive teaching and assessing method, the OSCE as a high impact assessment and tension of difference.

5.2: The OSCE as an inclusive teaching and assessment method

This study considered the OSCE as one method of assessment used within the current undergraduate nursing degree at the study's institution. The multiple aspects of the OSCE assessment, requiring students to recall and articulate knowledge and skills, write, read, understand, demonstrate time management, remember and process information, are all areas students with dyslexia may have difficulties with (BDA, 2009). This brought in to question whether the OSCE as a teaching and assessment method was inclusive for those with dyslexia.

Widening participation and inclusive teaching, learning and assessment are important and topical debates within higher education and are part of the policies of universities internationally; for example, in Australia (National Centre for Student Equity in Higher Education, 2017) and, within the United Kingdom, in the national strategy “Access and student success in higher education” (Department for Business Innovation and Skills, 2014). Other recent guidance by the Disabled Students Sector Leadership Group [for Higher Education] (Disabled Students’ Sector Leadership Group, 2017), Ofqual (2017) and the Higher Education Academy’s guide on inclusive learning and teaching in higher education (Hockling, 2010) promote inclusive teaching and assessment. All recommend that, if inclusive teaching and assessment methods are integrated into curricula, then students from all backgrounds or with disabilities will be able to participate in higher education, therefore, widening participation. It is discussed by Heaslip et al. (2017) that widening participation enables and encourages students from underrepresented groups, such as those with a disability, to access higher education. Heaslip et al. (2017) and Warren (2015) argue this then enriches learning for all students and promotes values of equality and tolerance not only within the education setting but, arguably, across the future workforce and society as a whole. Studies by Carey (2012), Marks (2007), Roberts and Mitchell (2005) and Carroll (2004) have all argued the need for nursing programmes to become more inclusive by accepting students from diverse backgrounds, including those with a disability, thus meeting the increasingly diverse requirements of society. Marks (2007) argues that, by widening participation in nursing, the classroom becomes more diverse and, therefore, the quality and equity of care achieved attains a higher standard.

The inclusion of students with a disability on an undergraduate Children’s Nursing degree course is evident within the current study. The cohort in the study had 150 students enrolled in year 3 of the course. When the study took place, 24 (19%) students had declared a disability, that of having dyslexia. This is a higher percentage than HESA records (HESA, 2014/15), which showed 10% of students in higher education were registered as having dyslexia and may be because the study university promotes inclusiveness and encourages

students to declare a disability. It may also be that the pressures of the academic component of the course reveal learning difficulties to individuals. This was the case in this study where the majority of the participants were diagnosed once they had started university because of the nature of their academic work. A further consideration could be that students believe the benefits of being registered with dyslexia, for example access to extra support, may outweigh the risks of having a recorded disability. This was shown in this study where participants commented on the extra support and allowances they were able to access to support their studies.

Having declared their dyslexia, the study participants are considered, by the HEI in the study and also within disability legislation, as students with a disability; one of the groups in the widening participation agenda considered to be under represented (Heaslip et al, 2017). The study did not consider other types of disabilities, but the high percentage of students with dyslexia does demonstrate, to some extent, widening participation in the study university, running this nursing programme. The higher percentage of students with dyslexia, therefore, begins to align with suggestions in previous studies of nursing needing to widen participation and encourage students with disabilities onto the courses (Carey, 2012; Marks, 2007; Roberts and Mitchell, 2005 and Carroll, 2004). As Gibson (2015) suggests, having students with a disability on a course enables a wider understanding of difference. This puts 'difference' at the centre of learning and assists in the development of effective inclusive pedagogies within a university as curricula and teaching needs to be accessible to all (Gibson, 2015). This, therefore, assists in promoting inclusion within a course for learners with, and without, a disability as was seen in the current study where students with dyslexia are studying alongside those without.

In order for programmes in any subject to widen participation, the areas of teaching and learning and assessment, as integral parts of an inclusive curriculum, need to be considered (Disabled Students' Sector Leadership Group, 2017; Heaslip et al, 2017; Ofqual, 2017; Howlin, 2014a; Devos, 2012; Wray et al, 2012; Hockling, 2010; Tee et al, 2010). The international debate around a universal design for instruction (UDI) and a universal design for

learning (UDL) suggests frameworks that give all participants equal opportunities to learn within a curriculum from instruction goals, methods, materials and assessments that work for everyone (Centre for Universal Design, 1997, cited in Black et al, 2014) to expression, representation and engagement of all learners (UDL) (CAST, 2013; Pliner and Johnson, 2004). It is the principles of a universal design being incorporated into curricula, teaching, assessments and learning that potentially create an inclusive environment for students and can reduce obstacles faced by students with dyslexia (Pino and Mortari, 2014) and encourage participation.

The teaching and learning strategies adopted within a curriculum are an essential part of the universal design of a course if inclusion of learners is to be promoted. Although this study was looking at the OSCE as an assessment strategy, the teaching methods and materials and how learning was achieved, became topics of discussion for the study participants in relation to how they prepared for the OSCE.

The participants in this study discussed multiple teaching resources that were available to assist them in learning the information required for the OSCE. Black et al. (2014) argues that the provision of multiple methods of presenting materials using visual, auditory and textual information can assist all students in their learning as well as promoting a flexible and engaging learning environment. These multiple methods, however, only succeed in engaging learners if the teacher relates meaning to the materials and the key concepts back to the larger context of the subject (Davies et al, 2013). Pino and Mortari (2014), in their systematic review, showed that interactive teaching methods, where contributions from all are valued, engaged learners and developed interaction with materials and other students. Their review also demonstrated the significance of practical learning and hands-on experience in the learning process (Pino and Mortari, 2014). Pino and Mortari (2014) further argue that having a student-centred learning environment enables rather than disables all learners through using the strengths of each individual to assist in the development of others' weaknesses. This was evident within the current study where the participants talked about the value of the practical, hands-on lessons

where they could work through the OSCE assessment in small groups prior to the actual assessment.

The OSCE is an assessment incorporating a variety of different topics that need to be learned by the students; therefore, the teaching materials need to reflect all areas to be assessed. It is also important that teaching materials reflect the variety of learners within a group by offering different types of resources. The study participants discussed the virtual learning environment being invaluable to them due to the variety of resources it contained. It is noticeable from the study that the students all preferred different teaching methods and materials with some using videos, others audio recordings, diagrams and images to assist with learning the material. Nursing is a hands-on course and one that has a 50% practice component so learning takes place in clinical practice areas, in the university classrooms and skills laboratories. The students with dyslexia interviewed in the study found group work and group practice a valuable method of teaching that assisted their learning. One student stated they found other people remembered different aspects of the materials and working with others helped them learn the areas they were forgetting or finding difficult. The study participants also saw the practice placements they were on prior to the OSCE as useful for enhancing the teaching from the university setting (Nolan, 2015). Being in practice enabled them to use the assessment skills learnt for the OSCE when caring for patients and, as discussed by the study participants, this helped them to remember the skills needed for the OSCE assessment. This demonstrates the link between teaching and learning in the classroom and the practice setting, their being complementary to each other, and providing another method of learning that is skill based. This is supported by Black et al. (2014), who suggest interactive activities and skills engage and develop communities of learners with, and without, disabilities. If these teaching and learning methods are used, then the principles of universal design become embedded in the curriculum.

The OSCE has been described by some as a teaching method as well as an assessment strategy (Alinier, 2003), one which could be used to develop the clinical skills and knowledge required in nursing. The OSCE could be beneficial

for all as a teaching method as many of the barriers experienced by students with disabilities such as dyslexia may also be experienced by students without a disability (Lopez- Gavira et al, 2016; Lombardi and Murray, 2011). The OSCE, however, is more often used as a formal assessment strategy than as a specific teaching method.

Assessment is another aspect of a universally designed curriculum (Craddock and Mathias, 2009; Byrne and Smyth, 2008) and should be aligned with the teaching and learning of a course. Barry et al. (2012) and Gibson and Leinster (2011) state that assessment strategies need to represent the learning outcomes of the programme they are part of. The participants in this study identified that it was the change from schoolwork and exams to the standard of academic work and assessments required in university that they found difficult. It was this difference in expectation that identified their difficulties in learning; an issue also identified by Lombardi and Murray (2011) in their study.

This change links to Carey's (2012) and Hopkin's (2011) findings that part of an inclusive design and assessment strategy is ensuring it meets the needs of the students and that all students can achieve the programme outcomes (Morris and Turnbull, 2005). Ranklin et al. (2010) argue that the same standard of achievement must be achieved by those with, or without, a disability. Within nursing courses, assessments must demonstrate that the individuals possess, and are competent in, the required knowledge and skills necessary to perform the role of a nurse and, therefore, meet the fitness to practice criteria set by the professional body (NMC, 2010). This means, firstly, the university needs to ensure the assessment strategies meet the inclusive criteria for students with a disability such as dyslexia (Sharp and Earle, 2000); secondly, the university needs to ensure that the assessments do not enable those not meeting the required fitness to practice criteria to pass the course. The NMC (2015) states that all registrants have to be fit to practice without supervision at the point of registration and, therefore, universities have to ensure students have met both the professional and academic requirements of the course despite any disability if they are to graduate.

Assessment strategies are varied throughout a course which means students have to adapt their learning techniques to the different methods. Vickerman and Blundell (2010) suggest that students with a disability often feel assessments are restrictive and put them at a disadvantage. Black et al. (2014) discuss traditional assessments, such as timed written examinations, multiple choice question examinations and written assignments, as potentially posing problems for those with a disability such as dyslexia as they are required to recall and write information in a restricted time; areas those with dyslexia often find more difficult. Black et al. (2014) argue that by following a universal design, different methods of assessment can be used which are more inclusive for all students.

The OSCE as a method of assessment can arguably be seen as a non-traditional inclusive method of assessment. The OSCE consists of different subsections that allow students to demonstrate clinical skills, clinical reasoning and application of theoretical knowledge; all areas that nursing students need to be able to perform in practice. The assessment allows students time at the start to make notes to assist them during the assessment itself and they can record information given to them throughout. This assists those with, and without, dyslexia as they do not need to memorise new information, but can use their notes. The OSCE's use of the different methods allows assessment of the students' theoretical knowledge and clinical assessment skills and shows how they can relate the theory to practice, linking into Miller's (1990, pS63) "show how" level of assessment; that is, they are assessed on performing the skills using the underpinning knowledge they have learnt, demonstrating to the public and professional bodies, therefore, that they possess some of the practical skills as well as the theoretical knowledge required in healthcare settings. Studies by Muldoon (2014) and Barry et al. (2013) showed that the OSCE is an important tool for assessing clinical skills and knowledge because it mirrors what students need to be able to do in practice. McCaughy and Traynor (2010) further suggest the OSCE mirrors practice environments, as students have to make decisions and solve problems in complex situations. Jay (2007) suggests the OSCE produces higher cognitive application of students' knowledge and clinical skills than written examinations. These points were highlighted in the current study where participants emphasised the relevance of the OSCE assessment

and discussed how it provided them with opportunities to demonstrate knowledge, link knowledge and skills to clinical practice and reflected the teaching received, therefore following the principles of a universal design. The inclusiveness of the OSCE as a method of assessment, however, is not well documented in the literature with most references to inclusiveness being in relation to more traditional methods used within assessment or to oral presentations and project work (Pino and Mortari, 2014; Konur, 2006).

Adjustment to teaching, learning and assessments is another area to be considered. If a universal design is followed, then the need for accommodation may decrease (Lombardi and Murray, 2011). Accommodation within the teaching and learning was identified within the study. As previously discussed, participants acknowledged the wide variety of resources available to them but felt that, to assist them as students with dyslexia, the inclusion of alternative support sessions would be advantageous. Group tutorials and small discussion groups were suggested alongside more videos and also different formats of written materials such as diagrams as methods to assist them in learning the different components of the OSCE (MacCullagh et al, 2016; Pino and Mortari, 2014). If a universal design is followed then, these could be incorporated within the teaching and learning of the OSCE rather than being used as support, thus reducing the need for accommodation and, possibly, benefiting all students, not just those with dyslexia. Within the study, students discussed how they were allowed extra time within the OSCE (5 minutes), which they all agreed helped them through the assessment process. Extra time was used, it was noted, in examinations and extensions on assignments, and is seen in the literature as one of the main adjustments made for students with dyslexia (MacCullagh et al, 2016; Sharp and Earle, 2000; Konur, 2006) although there is little discussion on the value of, or how to use, the extra time for oral or practical examinations for those with dyslexia or other learning disabilities. This study identified the majority of students used their extra time for reading the scenario and planning and had practised this as part of their learning technique for the OSCE.

5.3: The OSCE as a high impact assessment

The OSCE is a high impact assessment strategy requiring the recall and application of knowledge whilst performing clinical skills within a set time. This study identified that the students with dyslexia used a wide variety of study skills to assist them in learning the required information for the OSCE assessment. The study participants reported that there was a lot of information to learn for the different components of the OSCE, requiring different methods of learning (MacCullagh et al, 2016). Pereira et al (2016) suggest that students' approaches to learning are often influenced by the method of assessment or the tasks required by an assessment. This is evident from this study where the participants acknowledged they used different techniques for each part of the OSCE assessment; that is, for the A-D assessment all participants identified practising by using family, friends, teddy bears and props to aid their learning, whereas for the theoretical components they had written notes, cue cards or audio recordings of the information. One student commented on treating the OSCE like a song and dance routine where you have to learn the words and then the steps and then put them together to make a performance. This highlights the issue of whether high impact assessments, like the OSCE, focus on the student performing for the exam ('show how' component of Miller's (1990) pyramid) or can it take the student past this point and demonstrate the 'does' component of Miller's pyramid within their own practice, a point Miller (1990) argues is not predictable when conducting a one-off assessment.

The study participants all mentioned in the interviews that they learnt what was required to pass the assessment. Timed restricted examinations and tests demonstrate that learning tends to be tailored to the examination content rather than the broader concepts of the area being studied and, therefore, these assessment methods can create surface learning for some individuals (Biggs, 2006). Biggs (2006), however, does suggest that others do learn in a deeper way for these types of assessment, but which method is followed is dependent on the student's approach to learning and the environmental influence of the institution towards learning and the perceived relevance of the assessment. The OSCE assessment was seen by study participants to be relevant to practice and they described how they had used already some of the A-D assessment,

handover and medicine management in clinical practice, therefore, showing the OSCE to be more than just another examination to be undertaken (Einion, 2013; Jay, 2007 and Bronson et al, 2006).

What became evident from the current study was the extent of learning each participant described during the interview stage. The study participants' discussion on their learning strategies highlighted the considerable effort and time they spent revising and learning for the assessment to ensure they performed well. This corresponds to previous studies (MacCullagh et al, 2016; Konur, 2006) where it was seen that students with dyslexia reported spending considerable time and effort on their learning tasks. MacCullagh et al. (2016) further suggests that the reported intensity and frequent use of multiple learning methods by students with dyslexia could assist in developing deeper learning and creative problem-solving skills through the student having engaged with the topic more fully. MacCullagh et al. (2016) acknowledge that this intense effort may be disadvantageous to students as they may over work themselves, not be able to research a topic broadly and may miss out on social activities. Although these techniques, time and effort have been reported by students with dyslexia, it would be interesting to see if similar techniques, time and effort form part of the study skills of students without dyslexia. Exley's (2003) study showed that individuals have their own learning techniques and it cannot be presumed that all students with dyslexia will have the same strengths or weaknesses. While all the study participants used some similar learning techniques for some aspects of the OSCE, such as the A-D assessment, it was evident in this study that they also varied in their learning preferences and techniques for the more theoretical aspect of the OSCE.

This study's findings show that students had positive and negative responses to the OSCE as an assessment. The study participants discussed how they felt the OSCE increased confidence, found it realistic and was meaningful and fair. Interestingly 9 out of 12 participants stated they liked it as an assessment method. These findings concur with previous studies by Muldoon (2014), Warhurst et al. (2013), Smith et al. (2012) and Nulty et al. (2011), but these do not acknowledge whether the study participants had a disability such as

dyslexia while this study has identified the particular responses of students with dyslexia to this assessment method. The negative responses to the OSCE in this study, the feelings of anxiety, stress, nervousness, panic, fear and shock, are similar to findings in studies of students without dyslexia (Muldoon, 2014; Warhurst et al, 2014; Einion, 2013; Walsh et al, 2009; Major, 2005). The study also reported that having more than one station in a room was distracting and caused anxiety about giving the wrong information as they could hear the other person talking. This may need to be considered in the future but it can also be argued that clinical practice itself is not quiet and the 'show how' (Miller, 1990, p. S63) of the assessment is more authentic if students can complete the assessment in a room with distractions as this mirrors, to some extent, the real practice environment. Two students also stated the current OSCE is removed from reality and surreal, an issue also identified in Franklin's (2005) study.

This feeling of the OSCE being removed from reality may be overcome by the use of high-fidelity manikins as suggested by one participant. A review of studies by Norman et al. (2012), however, identified that the use of high fidelity simulators (HFS) rather than low fidelity simulators (LFS) offered no significant advantage for performance or learning. The use of either form of simulator appeared to result in consistent improvement in performance in the majority of studies considered within the review compared to results from non-simulated learning (Norman et al, 2012). The use of HFS manikins, therefore, within the OSCE may not be advantageous and, as Maron and Glavin (2003) suggest, what is important is the authenticity of the engineered fidelity and also the psychological fidelity offered by any simulator, to ensure high clinical skills and performance are learnt and transferred to clinical practice.

The one study previously conducted with students with dyslexia and the OSCE (Gibson and Leinster, 2011) showed that students with dyslexia tended to perform badly in clinical examination stations compared to written exams. They suggest the problems occur because of issues with data interpretation and organisation, but they acknowledge that further investigation is required into the poor performance of students with dyslexia in clinical examinations compared to those without (Gibson and Leinster, 2011). This study showed that although

students with dyslexia struggle with aspects of learning and assessment required by the OSCE, their experiences and struggles were similar, if not the same, as those reported experiences of students without dyslexia. All but one student interviewed in this study passed the OSCE at first attempt with all passing by the second attempt. This demonstrates that, with clear teaching and learning direction, self-determination and hard work, having dyslexia does not prevent individuals performing well and achieving the same outcomes as those without dyslexia. As Lopez-Gavira et al. (2016) argue, reducing the barriers and increasing the support for students with a disability often benefits students without a disability who often have the same problems and needs when completing assessments.

5.4: A tension of difference

A tension that arises is whether students with dyslexia are seen as 'different' within an institution and the higher education system as a whole, or whether institutions should embed diversity and disability into their policies and curricula so that difference is not an issue but a norm.

The Equality Act (2010) and the study university policy view disabilities as an 'impairment', following, therefore, the medical model which focuses on the individual pathology that impedes the individual rather than the social and societal barriers that may hinder an individual with dyslexia (Evan, 2015). Liasidou (2014) contends that, if disabled students are seen as having a pathology that needs fixing or compensating for, exclusion becomes an issue within the learning environment and between teachers and learners. This is also argued by Madriaga et al. (2010) who describe the view of disability as, at times, the 'ghettoisation' of students with a disability rather than their inclusion within the educational institution (Madriaga et al, 2010, p.649). This corresponds to Norwich's (2008) work on the tensions that exist with inclusion and inclusive education within schools. Norwich (2008) considers that, for inclusion to be achieved, what is seen as normal and ordinary has to be redefined to accommodate all individuals. He further argues that recognition of difference and diversity needs to be challenged so that diversity becomes normal and positive within society, and within education, and thus those with a

disability are not seen as different (Norwich, 2008). Norwich (2008) acknowledges that this can cause pressure for those involved as the need for inclusion and the drive to achieve targets and meet set standards are often in conflict, as is the case in nursing programmes between education achievement and professional standards.

Within the current study, the participants all acknowledged they had problems with learning but none of them directly mentioned the word 'dyslexia' when discussing their learning difficulties and none of them used the term 'disabled' when talking about their learning issues. All participants saw themselves as individuals, which is emphasised by the different objects brought to the interview. Four participants brought objects related to the OSCE assessment, illustrating their struggles (fob watch representing time, teddy bear representing the A-D assessment, cue cards as a way of remembering information and a poem representing the disconnect between reality and the assessment). Two of the participants, however, brought objects directly related to their dyslexia rather than the assessment. The descriptions of these objects (a coconut and a padlock) highlighted that students with dyslexia may need to have different tools from those without dyslexia (to open the coconut) or that it is possible for someone with dyslexia to achieve the required standard of knowledge but the methods used maybe different or initial learning may take longer (they know the code of the padlock but do not remember the sequence, therefore instead of one attempt it takes multiple attempts to unlock it). These different objects and descriptions support the view that students with dyslexia are individuals and not a collective group with the same learning difficulty (Pino and Mortari, 2014). As Norwich (2008) argues, identification of differences and disorders could be discarded with an alternative focus on what individuals can achieve. This study illustrates that those individuals with dyslexia may not necessarily need 'fixing' or 'compensation' but, as Konur (2006) argues, differences in learning needs should be acknowledged by institutions and society.

Participants in the study also talked about being grouped together and separated from their peers because of the extra time given for some assessments and, consequently, they did not feel they were considered as

individuals (Liasidou, 2014). This illustrates a tension between differential treatment being regarded as positive and needed by all in the group and the adjustment for the whole group not taking into account the individuality of the students; a point that should be considered within an inclusive education environment (Norwich, 2008). The OSCE does not segregate the participants in the way other examinations do, for example, using separate rooms for those with additional time; however, they were all grouped together on the schedule to complete the assessment because of the extra time they received. This did not appear to be a problem for the majority of the study participants but one participant used the extra time differently (within the A-D assessment) and found waiting for the others to finish the extra time in the first part, caused them anxiety. Consideration should be given to this when planning assessment schedules for OSCE assessments.

Grouping of students with dyslexia was also evident within the study in relation to the testing for dyslexia and in the support that was offered to the participants. It is acknowledged that policy influences how disability is viewed and the definition used decides who is classed as disabled and therefore able to receive support (Bjornsdottir, 2017). In order to receive any type of support, students need to declare a disability, according to the policy of the institution and the country's disability laws (Equality Act, 2010). This acknowledgement of having a disability again brings in tensions around identification for accommodation to assist students and the possibility that the identification can lead to issues involving stigmatisation, labelling and devaluation (Norwich, 2008). Konur (2006) argues that students with hidden disabilities, such as dyslexia, must ensure they are correctly registered if they are to receive financial allowances to support their studies. The study participants found this process difficult in some instances, one participant commenting on the large amount of paperwork and form filling that had to be completed to register, which became problematic due to their dyslexia; an issue that Holloway (2001) also found in her study. Other issues around financial support (how it could be used and the time before receipt) were problems for two participants. It does not appear to be clear to students how the support can be used which was highlighted when money for technological support (computers) was offered rather than for printing as was

required. Participants commented on Disability Service staff not knowing either. This demonstrates the need for individual support and support staff to be fully aware of support processes.

The support service experience was further commented on by participants within the study. The study identified that the support offered to participants was fairly standardised with little room for adaptation; an issue seen by Liasidou (2014) and Pino and Mortari (2014) in their studies. Some participants discussed how the support was not helpful and did not meet their learning needs or some of the techniques they used were never suggested by support services. Others did find the support useful and took all that was offered. The variety of responses demonstrates the individualism of the participants.

Although participants discussed not wanting to be 'grouped' as this took away their individualism, interestingly all students accepted the time adjustment for the OSCE assessment; that is, they all used the extra 5 minutes allowed within the assessment and accepted this standardised adjustment because it worked for them. None of the participants mentioned whether they sought advice on where or how to use the time to gain maximum benefit from the adjustment within this assessment. Studies by Liasidou (2014), Spratt and Florian (2015), Hadjidakou and Hartas (2008) found that support services follow a pathological approach and are reactive rather than proactive to students' needs and, therefore, are not always offering the right support for the individual student. The reactive approach to support was discussed by participants in this study. Participants highlighted support services were useful for some aspects of their studies but, for others, the support offered was not what they needed and did not assist them with their work. Some participants found that support staff did not have insight or knowledge of the course the students were following and, therefore, could not offer the right support.

Fossey (2017) and Warren (2015) argue that students need to be guided on the appropriate methods of learning for the academic tasks they will undertake, if academic success is to be achieved. Fossey (2017) further discusses how disability support staff may have different views or beliefs around how the learning difficulty affects individuals and, therefore, do not always assist in

negotiating adjustments appropriately. What has become apparent from this study is that students found the support services were able to offer help with the academic learning techniques and extra time for examinations and assignment writing but support outside these academic areas was not available.

Participants in the current study reported that the disability support services did not understand the assessment strategy when approached for assistance with the OSCE. This is concerning within a university where all social care curricula, include some form of OSCE within their assessment strategies. One participant felt that this was because the support staff did not have any knowledge of assessments such as the OSCE or the practice requirements of nursing, as they were not nurses. Howlin et al. (2014a) argue that work based courses, such as nursing, have unique challenges and these challenges are often unaddressed by disability support services or what is offered is not transferable to the clinical learning component of the course. Evans (2015) suggest that support staff do not always understand dyslexia, and dyslexia in nursing, therefore, offers extra challenges which may not be addressed until support staff understand the social, cultural and practice barriers faced by students with dyslexia undertaking a nursing course. Nolan's (2015) study identified that disability support staff often "feel at a loss, as they do not have a clear understanding of what the real day-to-day issues are" (Nolan, 2015, p488); a point identified by one participant in this study when seeking support around dyslexia and nursing practice and an issue that the same participant found frustrating when they were struggling with the course and their dyslexia. Konur (2006) and Hadjikakou and Hartas (2008) question whether this is because support services are centralised within the university to enable students to negotiate institutional barriers which ensures the institution is complying with disability legislation, rather than being concerned with the individual needs of the students. These findings are also shown in studies by Howlin et al. (2014a), Howlin et al. (2014b) and Evans (2013), which were looking at practice components of nursing courses and support of students in the clinical area. They are applicable to the issue of support with the OSCE, as the OSCE is assessing an aspect of clinical practice and students have to demonstrate practice skills.

Nursing is a profession with both clinical and theoretical aspects that students need to negotiate as they learn the profession. Those supporting students need to be aware of what areas may be more difficult for those with dyslexia and offer methods of support that suit them both academically and with practice skills. With the current shift away from individual Disabled Students' Allowance (DSA) (Disabled Students' Sector Leadership Group, 2017), it is important that disability services within institutions are fully aware of support measures required by all students and direct the institutions in ways of ensuring support for students on all courses, to ensure inclusiveness and achievement within education (Disabled Students' Sector Leadership Group, 2017).

This study has identified the individualism of nursing students with dyslexia and their unique ways of managing their learning difficulty in order to succeed in the OSCE assessment and also, more broadly, within the nursing profession. A universal design of curricula and assessment may assist in maintaining the individualism of all students, not just those with dyslexia and, therefore, may reduce the issues with support and assist institutions in complying with the Equality Act (2010) and their legal obligations for adjustment (Disabled Students' Sector Leadership Group, 2017). What must be affirmed is that despite having dyslexia the participants in this study all achieved the required clinical and theoretical competence as those without dyslexia and, therefore, are deemed safe to practice at the point of registration.

5.5: Strengths and weaknesses of the study

This study has offered insight into the perceptions and experiences of nursing students with dyslexia of the OSCE assessment. The mixed methods approach was the design for the topic under investigation, generating new and authentic data. The utilisation of online questionnaires and object-elicitation interviews as data collection methods created appropriate and relevant data for analysis and to answer the research question as demonstrated in the findings and this chapter. The initial online questionnaire created an avenue to potential participants without researcher influence (Polit et al, 2001). This was important as potential participants might not have disclosed their disability to others apart from Disability Services and, therefore, might not have wanted to be identified

directly (Morris and Turnbull, 2007). The questionnaire also allowed students to participate in either one or both parts of the study. If they wanted to take part in the interview stage, they were able to choose to provide direct contact details to the researcher, again reducing potential issues of coercion (Polit et al, 2001). The study sample size was small but this was expected, as the sample requirements were so specific: students with dyslexia who had undertaken the OSCE assessment at the study site. A total of 24 students met the criteria for this study and these were all emailed information about the study.

The online questionnaire achieved a 50% response rate (12 out of 24), which was a higher response than had been anticipated, with literature showing response rates for online surveys are low (Sue and Ritter, 2012; Cohen et al, 2011; Murray, 1999). This response may have been influenced by the students having a Facebook group and, once one student knew about the study, they communicated to the group and encouraged each other to participate. The weakness of the online survey appeared to be the open-ended questions, which were not completed in very much detail. This is not unusual with questionnaires and is documented as one of the issues experienced with this method of data collection (Cohen et al, 2011; Parahoo, 2008). The questionnaire was the first data set in this study and, although there was not much written in the free form answers, there were ideas seen that were taken forward into the interview stage. As there is little literature around the OSCE assessment and students with dyslexia, some free responses were needed to try and extrapolate information. Following this study, it may now be possible to change the free form questions to closed questions with multiple choice answers, as some insight into the learning techniques used in the OSCE by students with dyslexia has been gained.

Six students took part in the interviews, which was enough to generate in-depth data and align with recommendations of 4-10 participants for interviews (Creswell, 2014 and Plano Clarke, 2011). As Green and Thorogood (2014) argue, what is important is the richness of information gained from the interview rather than participation numbers. The interviews in this study all lasted between 30 and 45 minutes, allowing a large amount of data to be generated

and, consequently, insight into the individuals and the topic under investigation was achieved. Demographic data was not collected in either the questionnaire or interview stages of the study. The study used a purposive, non-probability sample and it is acknowledged this may not be representative of the main student population of the study site. For future studies demographic data could be collected in the questionnaire stage to have knowledge of the demographics of the respondents and allow comparison with broader cohort, course and university demographic data. This would, however, of course, only demonstrate the demographics of those who chose to participate.

The use of an object within the interviews became an interesting part of the study. The object was initially being used as an ice- breaker to encourage participants to share their ideas during the interview (Barton, 2015) but it became significant to each participant's experience. The objects chosen by the participants were varied as seen in Chapter four: Findings, with two participants bringing objects that represented their dyslexia and the other four objects related to the OSCE assessment. The participants appeared to have thought carefully about their objects, which could demonstrate their interest in the study and wish to participate, which assisted in producing relevant data for the subject under study. The use of the objects showed understanding and insight by participants into their dyslexia and their learning strategies, and demonstrated the individualism and creativity of the students and their desire to succeed in their OSCE and maximise their learning (Pino and Mortari, 2014; Konur, 2006). The objects appeared to encourage and empower personal discussions in the interviews and allowed understanding into the less visible dimensions of dyslexia and the OSCE experience, which otherwise might not have been discussed (Barton, 2015; Torre and Murphy, 2015). The potential problem arising from asking participants to bring an object with them could have been their thinking too much about the study topic prior to the interview thereby influencing their responses; or the object could have become the main discussion point. The pilot interview established some of the potential issues in integrating the object (Punch and Oancea, 2014) and then careful integration of the object by the interviewer kept the interview focused.

The presentation of findings as individual profiles has allowed the participants' personalities to be seen alongside their individual perceptions and experiences, which may have been lost if only thematic analysis had been used. This presentation also allowed the object to be linked into the findings as part of the picture of each individual. The individualism of the participants is significant for illustrating the importance of seeing students with dyslexia as individuals with different learning difficulties and different methods of learning. Through reading the individual cases, those without dyslexia may gain insight into what methods enable those with dyslexia to achieve in the OSCE assessment and across their course as a whole (Liasidou, 2014). Framework analysis used ensured the integration of the questionnaire and interview data, which is important when using mixed methods. The data from both was linked into the thematic charts and this ensured inclusion of data from those that did not participate in the interview, widening the range of views to be considered. Poor integration could have reduced the insight gained from the questionnaire data of those that had not been interviewed and is a consideration for any using a mix of methods within a study (Niglas, 2009). On reflection, it is felt that this study achieved good integration of data and has presented new and valuable insights into individuals with dyslexia and their individual experiences of the OSCE assessment. How then has this study contributed to current knowledge, practice and policy?

5.6: Contribution to knowledge, practice and policy

As shown in the initial literature review, dyslexia and disability are concepts that have been widely researched. This is also so of the OSCE as an assessment method within healthcare courses such as nursing and medicine. What became apparent, when reviewing previous studies, was the lack of studies on the OSCE assessment and dyslexia. As previously noted there is one study by Gibson and Leinster (2011) that compared the outcomes of students with dyslexia undertaking examinations and OSCE assessments in medicine but there appear to no studies considering the OSCE assessment for students with dyslexia on pre-registration nursing programmes. A further literature search, after the data collection phase of the study, was performed using the key words identified in the literature review: *Objective Structured Clinical Examination*

(OSCE), *Objective Structured Clinical Assessment (OSCA)*, and *Objective Structured Practical Examination (OSPE)*. No further studies on the OSCE assessment and dyslexia were identified. This study has, therefore, contributed to practical, theoretical and methodological knowledge.

5.6.1: Contribution to policy in higher education

The findings and further discussion demonstrates how the study can contribute to knowledge and enhance current research around the OSCE as a method of assessment within nursing programmes. It has initiated new knowledge specifically relating to nursing students with dyslexia and the OSCE assessment. The study has shown how a universal design for education programmes in higher education can assist in promoting inclusion of all students with, or without, a disability, as suggested by the Disability Student Sector Leadership Group (2017) and Ofqual (2017). It has also emphasised the need for subject specific provision of support for students rather than the centralised provision currently provided. The study highlighted the tensions that still exist between education, professional practice and inclusion in higher education and nursing, despite legislation and recommendations from advisory bodies seen in recent reports and studies on inclusive teaching and assessment and inclusion of students within education (Disabled Students' Sector Leadership Group, 2017; D'Arcy, 2014; Hocklings, 2010; Norwich, 2008).

5.6.2: Theoretical and practical knowledge

By investigating the OSCE assessment through the eyes of students with dyslexia, more insight has been gained about the OSCE as an assessment method and how it has also assisted in developing practice skills. The study has shown that the students were learning for an assessment, but what became apparent from the data was that the skills they were learning became integrated into their clinical practice. The A-D assessment is used within practice on a daily basis. This element of the OSCE allows students with, and without, dyslexia to gain valuable skills and knowledge, which they can take forward in their nursing career. The OSCE demonstrates the "show how" of clinical learning (Miller, 1990, p.563) which is also apparent with the other parts of the OSCE such as

medicine management and communication which are part of daily practice. The 'show how' (Miller, 1990, p.563) level of learning is essential within professional practice to ensure clinical competence and patients' safety. The OSCE assessment can be seen to assist in ensuring is achieved alongside the clinical competencies that have to be achieved throughout the course. The OSCE complements these clinical competencies and assists students to apply theory to practice. Although the study concentrated on students with dyslexia, the findings and knowledge gained from the study could probably be applied to assist nursing students without dyslexia undertaking an OSCE assessment. All nursing students have to have meet the same level of clinical competence at the end of their training; considering the techniques and strategies used by those with a learning difficulty may assist those without a learning difficulty to achieve the required standards of safe practice.

The different learning strategies identified by the study participants could possibly be transferable to all learners. The insight and creativity of the students with dyslexia in the study towards learning the different components of the OSCE could offer those without a learning difficulty, different ways of learning, that may assist them to undertake this assessment. The sharing of these methods could also allow students who have not been formally identified as having a learning difficulty, or do not wish to be formally registered as having a learning difficulty, insight into different techniques that could be used in their learning. The insight into the various methods used by the study participants to learn the required knowledge for the OSCE can be adopted and integrated into teaching and assessment within the curriculum, and also into study skill support sessions conducted by academics and support services for all students. The study participants suggested that support services did not have a lot of understanding of nursing or the OSCE assessment. This study, therefore, has offered some insight into the issues faced by nursing students which could be taken forward by support services as ways to assist students undertaking an OSCE assessment. By using the findings of this study alongside other teaching and learning strategies, academics could seek to develop an inclusive teaching and assessment practice and, therefore, those with a disability may not need to disclose their learning difficulty or seek separate support. This integration of the

many methods of learning into teaching and assessment by an institution would not have a cost implication and, with the Disabled Student Allowance criteria changing (Disabled Students' Sector Leadership Group, 2017), could offer the universal support for all students that is required under the Equality Act (Equality Act, 2010).

The undertaking of the OSCE assessment prior to registration can also be seen to assist in preparing the students with, and without dyslexia, for post registration education. The NMC requires all registrants to participate in continuous professional development activities (NMC, 2017a) and, consequently, education does not end with initial training programmes. The post-registration clinically orientated modules run at the study institution all have OSCE assessments as the method of assessment, alongside clinical competencies documents. If students have undertaken this method of assessment at pre-registration level, then they have some insight into the process when undertaking further studies. These students will also have developed their learning strategies for undertaking an OSCE assessment and can assist others who may not have completed this method of assessment.

Gibson and Leinster (2011) suggested that students with dyslexia perform poorly in an OSCE and studies are needed to compare to the performance of those with dyslexia with the performance of those without dyslexia. Although it is hard to draw conclusions from this small sample, in this current study there did not appear to be an issue with performance as five out of the six interview participants passed at the first attempt and one on the second. Performance outcomes were not formally investigated, however, within this study. Overall, this study has demonstrated that students with dyslexia can pass the OSCE assessment if they have undertaken the learning. This study has, as Gibson and Leinster's (2011) suggested in their recommendations, further considered students with dyslexia and the OSCE assessment method.

5.6.3: Methodological knowledge

The study has not only contributed to the knowledge around the OSCE assessment and students with dyslexia; it has also shown how elicitation

interviews can be used as a method within nursing education research and nursing research. The use of object elicitation interviews within this mixed method study offers researchers in healthcare fields another way of investigating practice of all descriptions. The integration of the object into the interviews, in this study, assisted the researcher in engaging the students within the interview process. The use of the object appeared to allow students to discuss their own dyslexia comfortably, aided them in describing how dyslexia affected them to the researcher and assisted the latter in understanding the difficulties the individual participants experienced with their dyslexia, without having to over question the participant to ensure such understanding. This was also seen with the objects used to illustrate the experiences of the OSCE by participants where the objects became integrated into the students' learning processes before, during and after the OSCE assessment. Interviews can be stressful and participants can feel vulnerable especially when discussing personal difficulties such as dyslexia (Barton, 2015; Torre and Murphy, 2015) and the integration of the chosen object appeared to allow the students to describe perceptions and experiences related to the OSCE more easily. The study has therefore supported previous findings around the use of objects when researching specific groups of people of which the researcher will not necessarily be a member (Barton, 2015; Torre and Murphy, 2015; Liebenberg et al, 2014; Firth and Harcourt, 2007; Clark-Ibanez, 2004; Dell Clark, 1999).

Although elicitation interviews are not a new methodology within research, there are few mixed method studies using elicitation as a part of their data collection method and, therefore, this study has added insight into using object elicitation interviews within a mixed method study.

5.7: Recommendations for the future

Having completed this study, discussed the findings in relation to current debates and considered the contribution to knowledge, policy and practice what recommendation can be made for the future?

5.7.1: Recommendations for research

This study is one of the first studies to investigate the specific perceptions and experiences of pre-registration nursing students with dyslexia and the OSCE as a method of assessment. It is acknowledged that the sample group was small and based within one study site so future studies, both within single study sites and possibly nationally, would assist in developing our knowledge concerning students with dyslexia and the OSCE assessment. It is difficult when investigating a subject area with few existing studies to know if the data collection tools will produce the required information. This study has started the generation of knowledge into students with dyslexia and the OSCE assessment, but there is a need for the data collection methods to be reviewed and the knowledge gained from the study now needs to be applied and used to enhance and develop the questionnaire and the interview questions, prior to repeating the study or developing other studies in this field.

5.7.2: Recommendations for practice

It has been shown that the OSCE, as an assessment method, poses problems for students with dyslexia and this study did ask the participants for ideas to assist future students with dyslexia to undertake the OSCE. The findings around extra preparation time and extra learning support were directly asked about in the questionnaire and as a question in the interview; however, the extra time and more tutorial support were also requested by all students. Following the data analysis within this study, the learning methods identified by the students have been used as examples when teaching the A-D assessment and other components of the OSCE. The different methods used by the students with dyslexia could be transferable to all students and hopefully offer insight into alternative learning strategies for all. Previous studies have shown similar findings to this study around the experiences of the OSCE for students without dyslexia and the difficulties encountered with the OSCE assessment. It would therefore be interesting to carry out a comparison study between students with, and without, dyslexia within the same cohort to identify if there are similarities between the two groups of students. It would also be beneficial to consider the experiences of the OSCE assessment for students with other disabilities and

compare their experiences to students with dyslexia and those without any disability.

5.7.3: Recommendations for policy in Higher Education

As ascertained in the discussion above, widening participation and inclusion needs to be addressed in relation to teaching, learning and assessment in higher education. The OSCE assessment follows a structured layout with students having to perform a physical assessment and then viva questions on their scenario. As identified in the discussion, there is a need to make assessments more flexible to ensure inclusion of all students. A suggestion arising from this study's findings is to make the pathophysiology section more flexible; that is giving students the choice to either verbalise their answer or, alternatively, write the answer down. This may enable students, with and without, dyslexia, who may find articulating complex theoretical information more difficult; an area that could be developed into a future study.

This study also identified gaps in the support of students with dyslexia on pre-registration nursing courses undertaking the OSCE assessment. It highlighted that support service personnel are not necessarily nurses and, therefore, do not necessarily understand the support requirements for nursing students, particularly in the practice component of their course and when undertaking practice examinations such as the OSCE. This poses problems for students and, with the shift away from individual disability allowances (Disabled Students' Sector Leadership Group, 2017), higher education institutions need to look at how they ensure inclusiveness and support the diverse range of learners undertaking higher education today (Heaslip et al, 2017; Liasidou, 2014). At present, Student Support Services at the study site are a university wide service rather than a speciality/school specific service, which may be one of the underlying problems with the gap in support for nursing students and other healthcare students. A possible solution would be to consider a working group to undertake a study on moving support services to speciality/ school specific support services, with support staff becoming more informed and developing skills to support all nursing students in all aspects of their courses. If this move was facilitated, it could also allow the nursing academics (who are also

registered nurses) to collaborate with support services to develop teaching, learning and assessment strategies that are fair and equitable to all students and provide the support services insight into what nursing is and the requirements for the clinical practice component of the course; recommendations also identified by Spratt and Florian (2015) and Howlin et al (2014a) in their respective studies.

A final consideration for future practice is around the design of future curricula. The pre-registration nursing curriculum has to be revalidated regularly (NMC, 2017b) to ensure it meets current standards for practice. Since this study was conducted, the curriculum has been changed for pre-registration nursing students starting in 2016. They now have a year- long skills module, where skills such as the A-D assessment are visited regularly throughout the three years. For those students on the old curriculum, changes to teaching and learning within the two modules, linking into the OSCE assessment, have been implemented. These changes have been the introduction of extra skills sessions within module one of year three where the OSCE is introduced in anticipation that when students reach the second module of year three (and the OSCE assessment itself) it is revision rather new information being addressed within the skills session. The increase in skills across the curriculum needs to be evaluated to see if there is a difference between performance in the OSCE between those students who had the year-long skills module and those that only had 3 skills sessions prior to the OSCE assessment which would assist academics in future planning of curricula.

In May 2018 the new NMC (2018) standards for pre-registration nursing have been published in which there is an increased clinical skills expectation and for nurses to be prescribing ready. In light of this there is potential for this study to influence areas of curricula design to promote widening participation and inclusive teaching, learning and assessment strategies to meet these new criteria for proficiency. The concept of universal design would benefit all students on the course, assist in enabling participation and possibly reduce the need for individual support for students with a disability. This study has highlighted areas that students with dyslexia find difficult as well as indicating

techniques that can be incorporated into teaching and learning strategies. The inclusion of the student voice is already part of the curriculum revalidation process with the NMC. Students are included in the design of the pre-registration curriculum and are encouraged to make suggestions about the course design and content. The inclusion of students with a disability would further enhance the curriculum revalidation process and offer insight into areas of the curricula that may disable rather than enable their participation, perhaps reducing some of the tensions between higher education, widening participation and inclusion.

This chapter has critically integrated the study findings with the current debates around inclusive design for curricula and dilemmas of difference. The strengths and weaknesses of the study have been considered and recommendations for change have been made. Contributions to knowledge, policy and practice are considered. There is evidence presented on changes that have been implemented to practice since the study was conducted and recommendations to develop future teaching, learning and assessment practice have been considered. Finally, ideas that have arisen from this study for further research have been presented.

5.8: Concluding comments

This study set out to explore the perceptions and experiences of the Objective Structured Clinical Examination (OSCE) as a method of assessment for pre-registration nursing students with dyslexia and to draw conclusions about how the OSCE can be improved as an assessment method. This final section will reflect on my thesis journey.

I started this study as someone who was a new senior lecturer in nursing education, an experienced senior nurse in children's intensive care nursing and a research student. I positioned myself, therefore, as researcher-practitioner who wished to investigate, understand and develop practice in the 'real world' of nurse education.

Having now completed the study, I continue to position myself as a researcher-practitioner and believe the study is influenced by factors such as feasibility, workability and my “real-world” perceptions. My role as an intensive care nurse means I utilise scientific quantitative evidence, qualitative evidence and practical knowledge on a daily basis and this has assisted in my education and research roles. Designing and conducting the study and writing the thesis has opened up different theoretical concepts and ways of knowing within education, disability studies and nursing. It has made me look in depth at how different lenses on truth and knowing offer different ways of seeing the same concept but demonstrates that all are valuable in their own right. It further confirmed that, as a nurse, there is a need to consider different lenses to ensure holistic care is achieved for patients in my care. It has shown that students are individuals who have unique qualities, which, as educators, we need to develop and use to assist them with their integration into the nursing profession. The available research around nursing students and dyslexia is minimal and, from conducting this study, I have discovered the unique and imaginative ways students with dyslexia try to achieve the expected outcomes of the nursing course. I now believe, as a nurse and an educator, I have started to develop a greater understanding of issues students with dyslexia experience across the nursing course and can use this to develop strategies in practice and education to try and reduce the barriers felt by such students.

Through conducting this study, the importance of showing students different ways of knowing and discovering new knowledge that they can then argue is relevant or not to their own practice, has been reinforced. I believe I can offer a more rounded view of practice by acknowledging evidence from multiple perspectives and assist students to challenge practice, hopefully inspiring them in their forthcoming careers. I feel I have gained confidence in my own ability to assist students in designing primary research studies of their own as well as developing skills to support them in doing so. The process of researching the literature, designing and conducting a study, analysing the data and contributing the findings to the current debates within the field has further developed my skills as a researcher and demonstrated my own ability to discover and investigate subjects that I am interested in. It has also opened up new,

sometimes difficult, debates and in doing so has developed my own knowledge and skills in the world of education.

Finally, from a personal position, the Education Doctorate has been an enormous journey starting seven years ago. I remember starting the first week of study and thinking “I’ll never get past the first module let alone complete a thesis”, but, seven years later, I have nearly arrived at my final destination. The journey has had its ups and downs, derailments but also pleasures and sense of achievement that allow me now to move forward, develop and keep achieving despite all the barriers that may be encountered. I have grown as a person, a nurse, an academic and as a researcher and I stand by the importance of Jarvis’ (1999) work, that expert practitioners bring ‘real world’ experiences to academia to be investigated and therefore assist in influencing effective and efficient practice.

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Appendix one

Characteristics of dyslexia

Signs/ Symptoms	Syndrome/ phenomenon/ condition/ continuum/ disorder	Alternatives
Reading difficulties Spelling difficulties Acquisition of language (expressive or receptive) Handwriting difficulties Writing difficulties Problems with maths Literacy issues Phonological processing <ul style="list-style-type: none"> receiving, holding, retrieving or structuring rapid naming processing speed Short term memory difficulties Sensory difficulties Cerebral difficulties Sequencing skills Organisation difficulties	Collection of symptoms Family of difficulties Different symptoms for different individuals Acquired Developmental Spectrum of difficulties	Impact on academic achievement Social construct “Doesn’t exist” No definition

Appendix two

Definitions of dyslexia

Definition	
“disorder manifested by difficulty in learning to read, despite conventional instruction, adequate intelligence and sociocultural opportunity”	World Federation of Neurologists (Critchley, 1999, p.361, cited in Mortimore and Crozier, 2006)
<p>”a neurologically based, often familial disorder which interferes with the acquisition of language. Varying in degrees of severity, it is manifested by difficulties in receptive and expressive language, including phonological processing, in reading, writing, spelling, handwriting and sometimes arithmetic. Dyslexia is not the result of lack of motivation, sensory impairment, inadequate instructional or environmental opportunities, but may occur together with these conditions. Although dyslexia is life-long, individuals with dyslexia frequently respond successfully to timely and appropriate interventions.”</p> <p>“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences</p>	<p>International Dyslexia Association (formally Orton Dyslexia Society, 1994)</p> <p>International Dyslexia Association (2002)</p>

may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”	
‘a specific learning difficulty which mainly affects the development of literacy and language-related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities. It tends to be resistant to conventional teaching methods, but its effects can be mitigated by appropriately specific intervention, including the application of information technology and supportive counselling.’	British Dyslexia Association (2009)
“Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty.”	British Psychological Society (1999, cited in Lucid Research, 2006, p.2)
“a specific difficulty, typically characterised by an unusual balance of skills. Dyslexia affects information processing (receiving, holding, retrieving and structuring information) and the speed of processing information. It therefore has an impact on skills such as reading, writing, using symbols and carrying out calculations.”	DfES (2004)

Appendix three

Research papers used for the questionnaire

Reference	Topic	Question related to
Gibson and Leinster (2011)	Problems of dyslexia	7
Alinier (2003)	Likert scale Learning Confidence	16, 17
Barry et al. (2012)	Explored students' experience of OSCE Preparation Process Learning	15, 18
Brosnan et al. (2006)	Likert scale General stats List of questions Assessment process Attitude of students to OSCE – meaningful/ fair	1-6, 8 12-13
Denhart (2008)	Barriers felt in OSCE What assistance Difficulties and OSCEs Problems of dyslexia	6-8 14
Forward and Hayward (2005)	Likert scales Theory - practice	23-24
Fuller et al. (2004)	How to write a questionnaire for dyslexics How learn What do you learn in preparation for OSCE	15, 18, 27
Jay (2007)	How to develop OSCE – ideas Exploration of perceptions Feelings – before, during and after an OSCE Relevance to practice Confidence	12, 21, 25, 30-31

	Benefit to learning	
Muldoon et al. (2014)	Likert scales Questions suggestions	Linked to all questions
Nulty et al. (2011)	Likert scales Questions suggestions	Linked to all questions
Dennie and Main (2006)	Preparation Impact of assessors	12,13,15, 18, 20
Selim et al. (2012)	Reflects teaching Learning Fair	13, 22,27
Rush et al. (2014)	Recommendations – good, keep, appropriate Confidence Motivation Stressful Assessors	30-35 17, 25, 29

Appendix four

Study questionnaire

Please complete the following information about yourself and your dyslexia.

Q1. Please state your age –

- 18-21, 22-25, 26- 30, 31-35, 36-40, 41-45, 46-50, 51-55

Q2. Are you male or female?

Q3. Which course are you studying for? (please tick the box next to your course)

- BSc Children's Nursing
- PGDip Children's Nursing

Q4. At what age were you diagnosed with dyslexia-

- 1-5yrs, 6-10yrs, 11-15yrs, 16-20yrs, 21-25yrs, 25-30yrs, 35yrs>

Q5. When were you diagnosed with dyslexia? (please tick the box that applies to you)

- in year one of your course
- in year two of your course
- in year three of your course

Q6. Do you receive any assistance for your dyslexia? yes or no (if answer yes link goes to next question if not skip to one after)

- What assistance do you receive?
- Who do you receive the assistance from?

Q7. How does dyslexia affect your learning? Likert scale (1- not at all to 10- all the time)

- Organisation of ideas
- Organisation of information
- Reading comprehension
- Oral comprehension
- Written comprehension
- Handwriting difficulties
- Verbal communication
- Having a different way of thinking
- Recall and memory of information

- Processing of information
- Sequencing skills
- Maths skills
- Other- please state what these are

Q8. Do you get extra time for your OSCE- yes or no? (if answered “yes” link goes to next question).

Q9. How did you use the extra time? (please tick one box)

- inside the room
- Outside the room
- Other – please state what this is.

Q10. What activities did you do in your extra time for example; the question, WETFLAG, calculations etc?

Q11. What strategies did you use to try and perform to your best in the OSCE? (free form written answer)

In relation to your dyslexia please answer the following questions about your feelings around the OSCE assessment.

(Likert scale answers -strongly agree to strongly disagree)

Q12. I believe the OSCE is a meaningful assessment.

Q13. I believe the OSCE is not a fair method of assessment.

Q14. There is sufficient time to complete the OSCE.

Q15. I felt prepared for the OSCE.

Q16. I felt nervous during the OSCE.

Q17. I did not find the OSCE stressful.

Q18. Preparation for the OSCE took a lot of time.

Q19. The OSCE took place in a suitable environment.

Q20. I did not understand the OSCE.

In relation to your dyslexia please answer the following questions your experiences of the OSCE assessment

(Likert Scale answers - strongly agree to strongly disagree)

Q21. The OSCE helped me to gain confidence in clinical assessment skills.

Q22. The OSCE did not provide an opportunity to demonstrate my theoretical knowledge.

Q23. The OSCE is relevant to my practice.

Q24. The guidelines for the OSCE helped with my preparation.

Q25. The sequencing of the OSCE is useful for recalling the different aspects of knowledge required.

Q26. The OSCE gave me an opportunity to learn.

Q27. The OSCE did not reflect the teaching.

Q28. The OSCE has had a positive impact on my motivation to become a nurse.

Thinking about the OSCE and your dyslexia please answer the following questions.

(Likert scale - strongly agree to strongly disagree)

Q30. The OSCE could be used to evaluate other skills.

Q31. OSCEs are an appropriate method of assessment for clinical skills.

Q32. The OSCE needs to be changed as an assessment method.

Q33. I liked the OSCE as an assessment method.

Q34. What would you change about the OSCE assessment for students with dyslexia? (free form written answer)

Q35. Would you like to take part in the interview stage of the study? Yes (link to next question) or No (finish questionnaire).

Q36. You have stated you would like to take part in the interview stage of this study. Please could you supply your name and a contact email or phone number to enable the researcher to contact you? Thank you

Appendix five

Recruitment email for the online questionnaire

(distributed via Disability Support Team so student contact details are unknown to researchers)

An exploratory study of dyslexic pre-registration nursing students' experiences of the Objective Structured Clinical Examination (OSCE) as a method of assessment

Dear Student,

My name is Tamzin and I work as a lecturer in Children's Nursing at London South Bank University. I am currently doing my Doctorate in Education at Exeter University and my thesis research is looking at dyslexic students' experiences of the Objective Structured Clinical Examination (OSCE).

I am keen to recruit students who are studying Children's Nursing at the London South Bank University and who are registered with the Disability Support Team as having dyslexia.

I am hoping that you can spare 10 to 15 minutes to complete an online survey about your experiences of the OSCE assessment method which can be found here [Bristol Online Survey URL]

You do not have to give your name, so your answers will be anonymous. If you would like to take part in an interview about your experience of OCSEs, however, you can give your contact details at the end.

If you would like to ask any questions before deciding whether to complete the online questionnaire, or would prefer an alternative format (such as a paper-based questionnaire or telephone interview), you can contact me or Professor Hazel Lawson:

Tamzin Dawson, tjd211@exeter.ac.uk, telephone: 0207 815 8474

Professor Hazel Lawson, H.A.Lawson@exeter.ac.uk

Appendix six

Interview check list and schedule

An exploratory study of dyslexic pre-registration nursing students' experiences of the Objective Structured Clinical Examination (OSCE) as a method of assessment

Interview prompt questions for students with dyslexia who have undertaken an OSCE assessment.

Introductions

Purpose of the interview.

Clarification of the topic under discussion.

Format of the interview-

- Demographics.
- Preparation.
- Outside the room.
- Inside the room.
- How feel now.
- Inclusion of object.

Approximate length of interview.

Go through consent form.

Assurance of confidentiality.

Purpose and use of digital recorder (including consent for its use).

Information that the interviewer may make notes on answers to assist with clarification of answers or recording.

Assurance that the participant can seek clarification of questions.

Assurance that the participant can decline to answer a question(s) or terminate the interview.

Assurance that the participant can ask questions.

Participant signs consent form.

Demographics

1. In the questionnaire response you say you were diagnosed with dyslexia at the age of.....Please tell me more about this

- Where?
- Feelings around diagnosis.
- Perceived effects of dyslexia.

Preparation

2. In relation to the OSCE assessment and your dyslexia please describe your experience of preparing for the pathophysiology and medicine management part of the OSCE.

- Methods for preparing.
- Methods of learning e.g. diagrams.
- How do you decide what to learn for each section?
- If there was something you found difficult to prepare for, please describe what you did.
- If there were areas you found easier to prepare for, please describe the techniques used to learn these.

3. In relation to the OSCE assessment and your dyslexia please, describe your experience of preparing for the clinical component of the OSCE i.e. the patient assessment.

- Methods for revising.
- Methods of learning used e.g. diagrams.
- How do you decide what to learn for each section?
- If there was something you found difficult, describe how you prepared for this.
- If there were areas, you found easier describe the techniques used to learn these.

4. The object/ article you have brought with you is Please describe how this relates into your preparation for the OSCE...

Outside

5. In your questionnaire you said you do/do not get extra time in the OSCE assessment and you use it outside the room. Please describe

- How you felt outside the room.
- What activities you did outside the room.
- How you used your extra time.

6. Please describe how the object relates to your experience outside the room.

Inside

7. Please tell me about your experience of entering the room.

- Feelings.
- Behaviour.
- Thoughts.

8. Please describe your experience of the actual OSCE process as a student with dyslexia.

9. In relation to your dyslexia and the OSCE please describe the tactics you use to complete

- Clinical assessment
- Numeracy component
- Theoretical part

10. Please explain why you use these and explain how they help you.

11. Please can you tell me about the environment of the OSCE.

12. Please tell me about your experience of the assessors during the OSCE.

- How did they make you feel?
- How did they interact with you?

13. Please tell me how the object relates to your experience inside the room.

How you feel now

14. Please describe what you think might help you and others with dyslexia to complete the OSCE assessment.

15. Please describe areas that you believe are more difficult for those with dyslexia in the OSCE.

16. Please describe any changes you would make to the process.

17. How does your object relate to how you feel/ represent the OSCE now....

18. You have had your results now. Please sum up your overall experience of the OSCE assessment as a student with dyslexia.

19. Please describe anything else you would like to say about your experience of the OSCE assessment.

Thank you for taking part in this interview.

Appendix seven



INFORMATION SHEET AND CONSENT

FORM FOR RESEARCH

Title of Research Project

An exploratory study of dyslexic pre-registration nursing students' experiences of the Objective Structured Clinical Examination (OSCE) as a method of assessment

Details of Project

The purpose of this study is to explore the OSCE as a method of assessment for student nurses with dyslexia. The study focuses on your experiences and perceptions of the OSCE to help draw conclusions on how this method of assessment can be improved. You will be asked to bring an object drawing or something that represents your experience of the OSCE to the interview. This research has no funding and is part of the researcher's Education Doctorate studies.

Contact Details

For further information about the research or for alternative methods of receiving this information (e.g audio taped information sheet, enlarged script), please contact:

Name: Tamzin Dawson

Postal address: V606, London South Bank University, 103 Borough Road,
London

Telephone: 00 44 (0)207 815 8474

Email: tjd211@exeter.ac.uk

If you have questions about the research you would like to discuss with someone else at the University, please contact:

Professor Hazel Lawson (Academic supervisor), H.A.Lawson@exeter.ac.uk

Confidentiality and anonymity

All information which is collected about you during the course of the research will be kept strictly confidential. Interview recordings and transcripts will be held in confidence and anonymised. Your name and the name of any other people will not be used - your data will be given a numbered code to denote what number participant you are so any information collected will remain anonymous.

The data will not be used other than for the purposes of this study and third parties will not be allowed access to it (except as may be required by the law). If you request it, you will be supplied with a copy of your interview transcript so that you can comment on and edit it as you see fit (if so, please give your email below so that I am able to contact you at a later date).

All recordings, transcripts and notes will be stored in a locked cabinet separate from the consent forms and code lists for 5 years after the research has been completed. Data will be stored on Exeter University "U drive" and in a password protected dropbox file. Consent forms will be kept in a locked cabinet for 5 years.

The information and findings may be published or presented in journals or at conferences but your name or any material that may identify you will not be used.

Data Protection Notice - The information you provide will be used for research purposes and your personal data will be processed in accordance with current data protection legislation and the University's notification lodged at the Information Commissioner's Office. Your personal data will be treated in the strictest confidence and will not be disclosed to any unauthorised third parties. The results of the research will be published in anonymised form.

INFORMATION SHEET AND CONSENT FORM FOR RESEARCH

Consent

I have been fully informed about the aims and purposes of the project.

I understand that:

- there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation and may also request that my data be destroyed
- I have the right to refuse permission for the publication of any information about me
- any information which I give will be used solely for the purposes of this research project, which may include publications or academic conference or seminar presentations
- the interviews will be recorded for the purpose of transcription and that excerpts from my interview may be used in the writing up of this study to illustrate key points.
- all information I give will be treated as confidential
- the researcher will make every effort to preserve my anonymity and the anonymity of the institution involved in the study

(Signature of participant)

(Date)

(Printed name of participant) (Email address of participant if you would like to view a copy of your interview transcript.)

(Signature of researcher)

(Printed name of researcher)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher(s).

Your contact details are kept separately from your interview data.

Appendix eight

Data sheet one

Appendix

Script

✓ 5103

P2 - P4 (116)

3. How dyslexia effects you

<u>Description</u>	<u>What does this mean?</u>	<u>Initial there</u>
<ul style="list-style-type: none"> • I think it's comprehension - reading • performed poorly on sequence test. • have longer to read 100 pages of a book (or compressed) to finish a unit. • have longer to digest the information • takes longer to feel confident to repeat + answer questions on the information • people think I have slower processing time which could be where reading comprehension comes in • dyslexia is a spectrum • can feel paralysed - not motivated, demotivated from others • people view as serious + over state it. • university groups you together with other dyslexic students • 7.5% extra time in exams • 2 and extra on essays 	<p>not fully aware knowledge</p> <p>has it effects person</p> <p>opinion on dyslexia has it effects person</p> <p>has it effects person</p> <p>others opinion has it effects person</p> <p>opinion of dyslexia</p> <p>- how treated by others</p> <p>others opinion of dyslexia impact</p> <p>has treated by others</p> <p>what assistance type of</p>	<p>uncertainty</p> <p>definition</p> <p>uncertainty</p> <p>definition</p> <p>labeling</p> <p>uncertainty</p> <p>labeling</p> <p>support</p>

Appendix	Topics	Initial themes found	How it affects person
<p>⑤ HOW TO MAKE THE OCE</p> <ul style="list-style-type: none"> - prep - during 	<p>⑦ EXPERIENCE OF THE ASSESSOR</p> <ul style="list-style-type: none"> 7.1 - personality 7.2 - positioning 	<p>③ HOW IT AFFECTS PERSON</p> <ul style="list-style-type: none"> 3.1 - cognitively 3.2 - physically 3.3 - coping strategies 	<p>③</p>
<p>② EFFECTS ON PERSON</p> <ul style="list-style-type: none"> 2.1 - negative 2.2 - positive 2.3 - life changing 	<p>① PATTERNS OF DIAGNOSIS</p> <ul style="list-style-type: none"> 1.1 - School/college 1.2 - University 1.3 - Advised 	<p>④ LEARNING</p> <ul style="list-style-type: none"> 4.1 - Techniques for studying 4.2 - Advice 4.3 - Assistance 	<p>④</p>
	<p>⑥ EXPERIENCE OF THE EXAM</p> <ul style="list-style-type: none"> 6.1 - Pre 6.2 - During 6.3 - After - external 	<p>⑧ DIAGNOSIS</p> <ul style="list-style-type: none"> 8.1 - University 8.2 - Feelings 8.3 - Methods of coping 	<p>⑧</p>

Main Themes- after initial analysis

Main Theme	Subthemes	Final Theme
1. Impact of diagnosis and recognition of diagnosis	<ul style="list-style-type: none"> • Becoming diagnosed • Uncertainty • Impact and recognition of diagnosis 	Impact and response to the impact of dyslexia
2. Labelling	<ul style="list-style-type: none"> • Own opinion of dyslexia • Others' opinion of dyslexia • How treated by others • Opinion of own learning methods 	
3. Support	<ul style="list-style-type: none"> • Type of assistance needed • Others' opinion of requirement • Positive and negative assistance • Assistance with OSCE - +ve • Assistance with OSCE - -ve 	
4. Views and effects of dyslexia	<ul style="list-style-type: none"> • How dyslexia affects me • Positive effects • How it affects my learning • Opinion of learning methods • OSCE effect on person • Impact of OSCE on self - +ve/-ve 	

Main Theme	Subthemes	Final Theme
5. Assessors	<ul style="list-style-type: none"> • Assessor behaviour/ response • Assessor personality • Assessor positioning • Knowing the assessor • Feelings around the assessor • Techniques 	The assessment process
6. Learning for assessment with dyslexia	<ul style="list-style-type: none"> • What works for me • Opinion of learning • How affects the person • Link to practice • Working with others 	
7. Assessment effect on person	<ul style="list-style-type: none"> • Effect of the OSCE on person • Impact of OSCE on self • Issues encountered • Difficulties in the exam • Performance 	
8. The future	<ul style="list-style-type: none"> • Extra support • Support services • Preparation • Changes to exam 	Recommendations for the Future

Appendix eleven

Data sheet three

Appendix	Main themes	Diagnosis	Impact of Diabetes on the person	Script
1. Impact of diagnosis + recognition	a) becoming diagnosed	6/25/3 - FAT		a) diagnosed W yrs 1 of uni it was underlying @! school but didn't want to have it as stigma attached to it. Really didn't want to have it @ the time. (4-115)
b) uncertainty	b) uncertainty	Age 22-25 yrs diagnosed - 16-20 yrs uni		When started uni still didn't want to have it but realised there was help + wanted to have it self prescribed @ student services + was diagnosed (20-22)
c) impact + recognition	c) impact + recognition	Recognised corporate And		b) issues around having diabetes as a teenager due to stigma attached to it @ school. (12-14) (30-31)
				Student services helped with diagnosis and afterwards, struggled with decision (30-31)
				It isn't as bad being diagnosed as an adult because you're in charge of your own health + doing it for your own benefit. (33-34) (28-31)
				At school didn't want to have extra thing + didn't want to be in separate room from friends (31, 32)
				It is still frustrating when you have exams + you get extra time but you're separated from your friends. (34-35)
				Now I'm kind of over it + it doesn't affect me as much it's for our benefit + it's gonna help me. (38-40)
				- Diabetes beneficial and positive thing helped. Tans and getting stuff (50)

MAIN THEMES

2. LAZYNESS

- criticism of dyslexia
- other opinion of dyslexia
- has mental disorder
- criticism on learning methods

SILENT

1. 153

1st

SOCIETY

- providing the information when reading it, reading it then becoming it down to understanding it (153)
"it takes me a hell of a lot of time to do that" (153)
time to do things - considerable time in university textbooks (153-54)
sometimes spending but without really being to much of an issue (153-54) - occasionally get the good mixed mixed up (153) - it's the comprehension stage (153)
in the pressure there is no mark were of his effort (153)
better to present things wrong (153)
not like friends (153)
stigma of being dyslexic (153)
everyday has and learning style (153)
"I must sound like an absolute idiot case but it's how it works for me" (153) (153)
knows the pressure but struggle to understand (153)
also pressure it needs - look (153) is to who represents that I know the answers but sometimes I'm in the wrong type of case or you get the wrong information + you have to keep trying at it to try to make it (153-54)
1) talk to mother - "Oh, go it sounds so hard" doesn't it" (153)
working on harder - "much to mum's despair" (153)
2) no sleep + take more time (153)
maths difficult (153)

STORY

- 9
- 1, 9, 2, 9, 3
- 4, 9, 5, 9, 11
- 9, 9, 4, 10, 9, 12

Chart 2 - Views and Effects of Dyslexia

	Pat	Frankie	Chris	Tyler	Charlie	Paris
Own opinion of dyslexia	Stigma (112) Not like friends (542) Processing information with reading and comprehension (44-48) Takes time to do things (48) Spelling not an issue (51-52) Under pressure increases effect (162, 58-59) Struggle to verbalise(161-166, 554-562) Intimidated by maths (218) Slower (174) Object – link Questionnaire (9.0-9.12)	Unsure of exact issues (45-50) Short term memory (43,47,59,62,372) Brain loses information (139, 183) Brain collapses in stressful situations (154-159) Recall and memory of information (43,47,59,62,372) Reading out loud, verbalisation and writing down information (68-76, 118) Questionnaire (9.0-9.12)	Can do what others can (45-48) Need to borrow tools (447-449,504,505) Brain goes off in different directions (70-75) Unorganised (70-75) Different tools – don't like computers (176-177,196,209,186-188,406,413,447) Intimidated by maths (109,111,375) Takes ages to write things (123-125,139) Comprehension Black writing flashes at me Funny with colours (153-155) Object- link Questionnaire (9.0-9.12)	Different sort of dyslexia (16-20) Lack of confidence (50-53,88) Numbers become jumbled (16-20, 176,177) Can't tell you what read (16-20, 88-89) Spelling of new words (60-61) Don't trust brain (176) Good at presentations and following verbal instructions (66-67,62) Visual memory of what things look like (108) Struggled (11) Questionnaire (9.0-9.12)	Stigma (22-24) Processing takes time (17-18,480) Brain quicker than what writing (560-564) Have to ask and re-ask (530) Yellow paper or overlay needed (81,82,94,95) Not the end of the world (29-30) Have to concentrate (350-352)	Feel different (24-25) Saw as a negative (34-35) Not an individual (53-54,68-72) Feels labelled, patronised and debilitated (53-54,55-63) Takes longer to read and process information (49-52) Swaps components of numbers and mnemonics around (217-230) What say is often different from what thinking (217-220) Reading and comprehension (49-52) Questionnaire (9.0-9.12)

Other opinion of dyslexia		Others don't know (352) Can't be a nurse and be dyslexic (355,352)				Serious and over statement (55-72)
How treated by others		No experience of nursing and dyslexia (352,356)	Recognised issue (7-8,28-29)		Supported by staff and disability centre (51-54)	Not as individual Grouped together with others Labelled (55-72)

Main Theme	Subthemes	Final theme
Labelling Views and effects of dyslexia	Own opinion of dyslexia Others' opinion of dyslexia How treated by others How dyslexia affects me Positive effects	Views and effects of dyslexia
Labelling Views and effects of dyslexia	Opinion of own learning methods How it affects learning Opinion of learning methods	Learning for assessment
Views and effects of dyslexia	OSCE effect on person Positive impact of OSCE Negative impact of OSCE	Assessment effect on person

Appendix fourteen



GRADUATE SCHOOL OF EDUCATION

St Luke's Campus Heavitree Road Exeter UK EX1 2LU

<http://socialsciences.exeter.ac.uk/education/>

CERTIFICATE OF ETHICAL APPROVAL

Title of Project: An exploratory study of dyslexic pre-registration nursing students' experiences of the Objective Structured Clinical Examination (OSCE) as a method of assessment

Researcher(s) name: Tamzin Dawson

Supervisor(s): Hazel Lawson

Karen Mattick

This project has been approved for the period

From: 01.04.2016

To: 37.07.2019

Ethics Committee approval reference: D/15/16/38

Signature: (Dr Philip Durrant, Chair, Graduate School of Education Ethics Committee)

A handwritten signature in black ink, appearing to read 'P. Durrant', written over a horizontal line.

Date: 31.03.2016

Appendix fifteen

London South Bank University

Tamzin Dawson

School of Health and Social Care London South Bank University 103 Borough
Road London

SE1 0AA Monday 23 May 2016 Dear Tamzin

Direct line: 020-7815 6025 E-mail: mitchen5@lsbu.ac.uk Ref: UREC 1625

**RE: An exploratory study of dyslexic pre-registration nursing students'
experiences of the Objective Structured Clinical Examination (OSCE) as a
method of assessment**

Thank you for submitting this proposal and for your response to the reviewers'
comments.

I am pleased to inform you that full Chair's Approval has been given by Vice
Chair, Rachel Taylor, on behalf of the University Research Ethics Committee.

I wish you every success with your research.

Yours sincerely,



Nicola Mitchell Secretary, LSBU Research Ethics Committee

cc: Prof Shushma Patel, Chair, LSBU Research Ethics Committee

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